NB_MB Level 3-1
Training Materials

(version 1.7)

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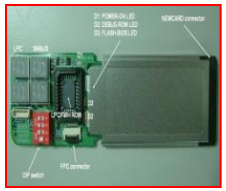
Chapter 1
ASUS Repair Fixture introduce

ASUS Repair Fixture Package Contents

PART NUMBER	Part Name	Amount	Photo
80-C1TAK0-0300	PORT80_MPCI	1	
90-C1G404-10P0Z	LPC Debug Card	1	
60-NDDDB1000-B01P	PCI-E Debug Card	1	
80-C1K090-00A01	CSC_NB_MXM230	1	
08-900037800	DDR2-DIMM	1	

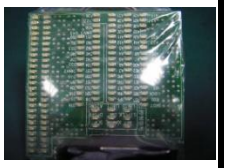
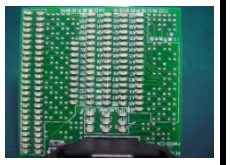
ASUS Repair Fixture Package Contents

PART NUMBER	Part Name	Amount	Photo
60R-R0000190	ENG_TSNB_IDECON REV1.0	1	
90-N00EG1D00Y	EC JIG_BOARD3	1	
14G122300240	24 pin FFC Cable	1	
60R-R0000170	ENG_TSNB_HDDPIN/B REV1.0	1	
60R-R0000160	ENG_TSNB_CDPIN/B REV1.0	1	

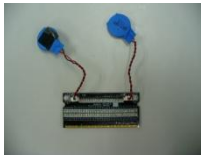
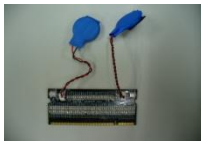
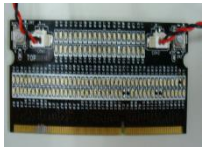
ASUS Repair Fixture Package Contents

Part Number	Part Name	Amount	Photo
22-060000483	FFC CABLE 26P 1.0mm	1	
60R-R0000100	Mini PCI Test Fixture	1	
60R-R0000080	PCI SLOT Test Fixture	1	
22-060000482	FFC CABLE 24P 1.0mm	1	
22-220000200	FFC CABLE 28P 1.0mm	1	

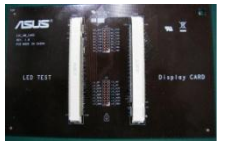
ASUS Repair Fixture Package Contents

Part Number	Part Name	Amount	Photo
60R-R0000230	AC WIRE CABLE	1	
20-LT0102659	Centrino 2	1	
20-LT0102660	Centrino 3	1	
20-LT0102661	Centrino 4	1	
20-LT0102662	AMD 638	1	

ASUS Repair Fixture Package Contents

Part Number	Part Name	Amount	Photo
80-C1K020-00A01	CSC_NB_DDR2_TEST_TOOL_TOP	1	
80-C1K030-00A01	CSC_NB_DDR2_TEST_TOOL_BOTTOM	1	
80-C1K050-00A01	CSC_NB_DDR3_TEST_TOOL_TOP	1	
80-C1K040-00A01	CSC_NB_DDR3_TEST_TOOL_BOTTOM	1	

ASUS Repair Fixture Package Contents

Part Number	Part Name	Amount	Photo
80-C1K0A0-00A01	CSC_NB_CARD	1	
20-LT0400685	Adapter Test Tooling	1	
90R-NZADB1000Y	NB DRAM DEBUG CARD	1	
80-C1K0G0-00B01	CSC_NB_PGA989_TOOL	1	

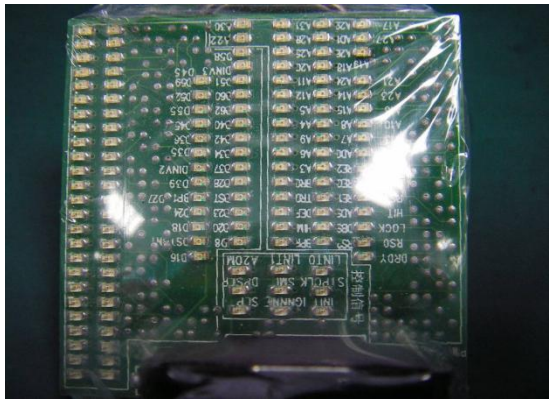
ASUS Repair Fixture Package Contents

Part Number	Part Name	Amount	Photo
80-C1K090-00A01	CSC_NB_MXM230	1	
80-C1K0B0-00A01 (CSC_NB_VGA_CARD1 80-C1K0C0-00A01 (CSC_NB_VGA_CARD2	NB VGA BOARD Converter Board(二合一)	1	
80-C1K0D0-00A01 (CSC_NB_KB_24PIN 80-C1K0E0-00A01 CSC_NB_KB_28PIN	NB KB cable Converter Board (24pin & 28pin)	1	

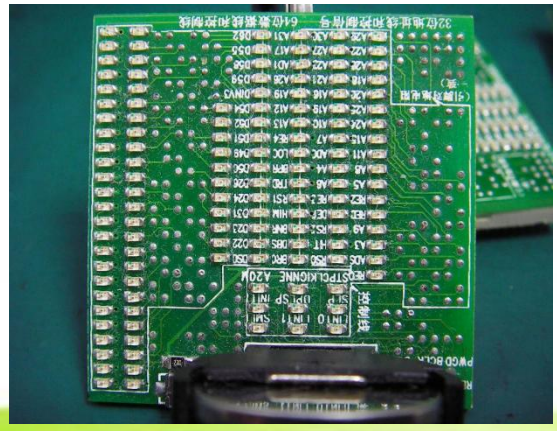
Chapter 2
CPU Signal Measure Fixture Tool

CPU Signal Measure Fixture

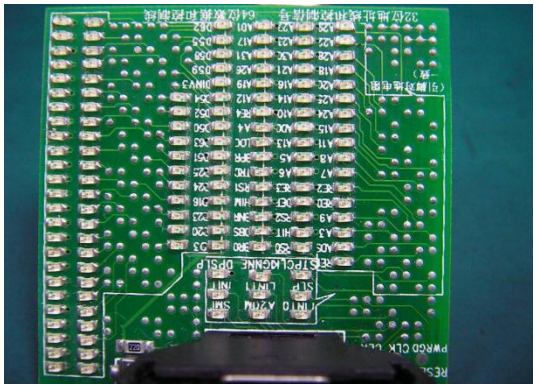
Part Number: 20-LT0102659
Part Name: NB CENTRINO 2 CPU SOCKET TEST(Sonoma)



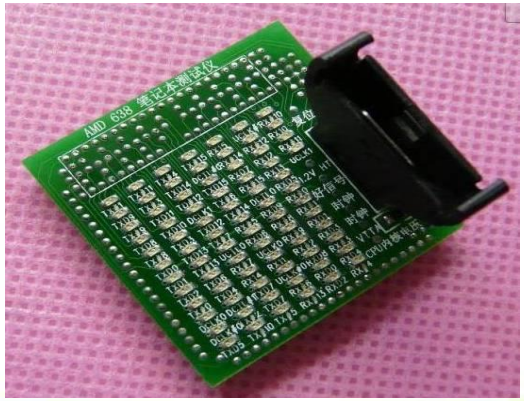
Part Number : 20-LT0102660
Part Name : NB CENTRINO 3 CPU SOCKET TEST(Napa)



Part Number : 20-LT0102661
Part Name : NB CENTRINO 4 CPU SOCKET TEST(Santarosa)



Part Number : 90R-NZADB1000Y
Part Name : NB DRAM DEBUG CARD

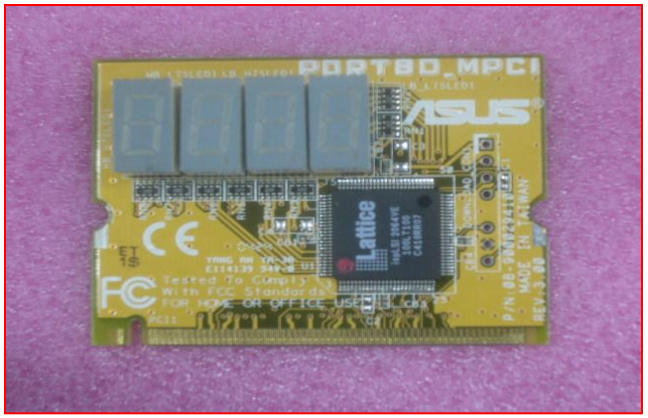


Chapter 3
Port 80 Debug Card Fixture Tool

- PORT80_MPCI
- PCI Debug Card
- LPC Debug Card
- NB DRAM DEBUG CARD

Port 80 Debug Card Tool

Part Number : 80-C1TAK0-0300
Part Name PORT80_MPCI



Part Number : 60-NDDDB1000-B01P
Part Name :W1J NEWCARD DEBUG CARD

Part Number : 70-C1G343-A01
Part Name : DIAGS_LPC_CAPTURE

Part Number : 70-C1G343-A01
Part Name : DIAGS_LPC_CAPTURE

Chapter 4
Other Signal Measure Fixture tool

RAM Signal Measure Fixture

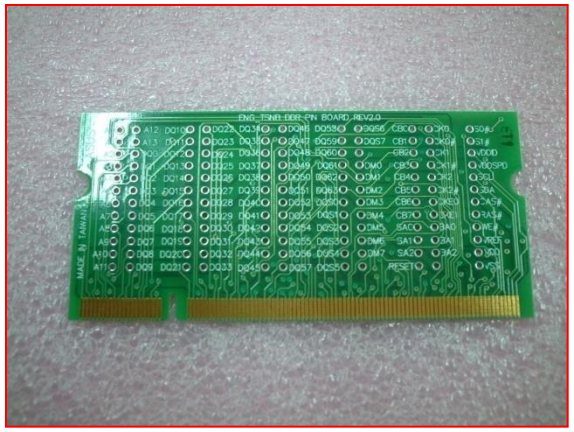
- DDR-DIMM
- DDR2-DIMM
- CSC_NB_DDR2_TEST_TOOL_TOP
- CSC_NB_DDR2_TEST_TOOL_BOTTOM
- CSC_NB_DDR3_TEST_TOOL_TOP
- CSC_NB_DDR3_TEST_TOOL_BOTTOM

IDE/ODD Signal Measure Fixture

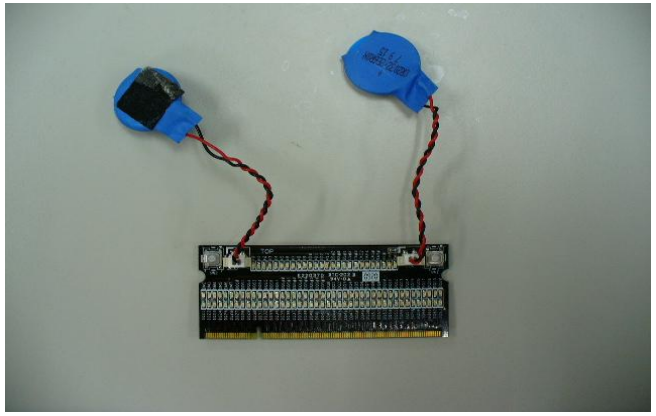
- ENG_TSNB_HDDPIN/B REV1.0
- ENG_TSNB_CDPIN/B REV1.0

RAM Signal Measure Fixture

Part Number : 08-900029500
Part Name : DDR-DIMM

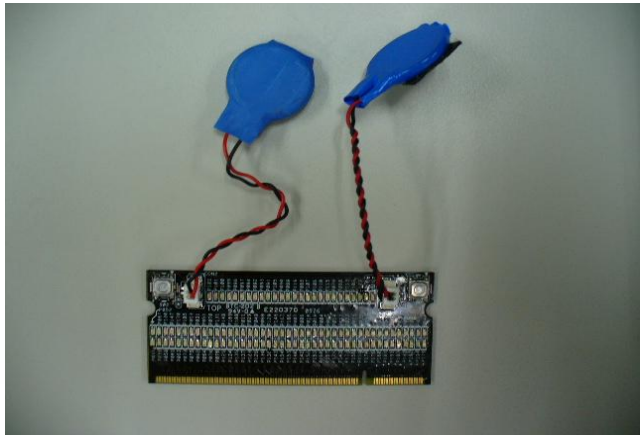


Part Number : 80-C1K020-00A01
Part Name : CSC_NB_DDR2_TEST_TOOL_TOP



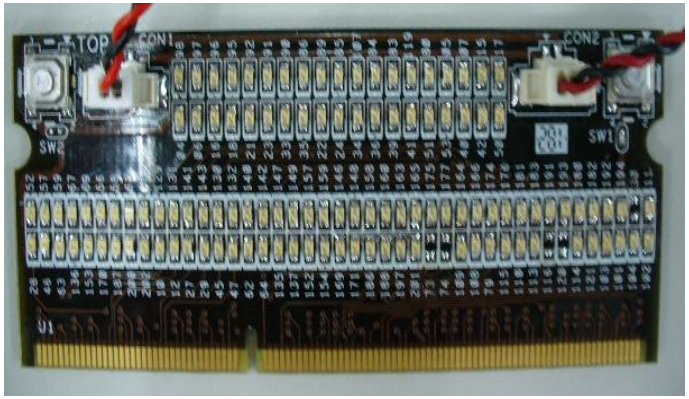
Part Number : 08-900037800
Part Name : DDR2-DIMM

Part Number : 80-C1K030-00A01
Part Name : CSC_NB_DDR2_TEST_TOOL_BOTTOM



RAM Signal Measure Fixture

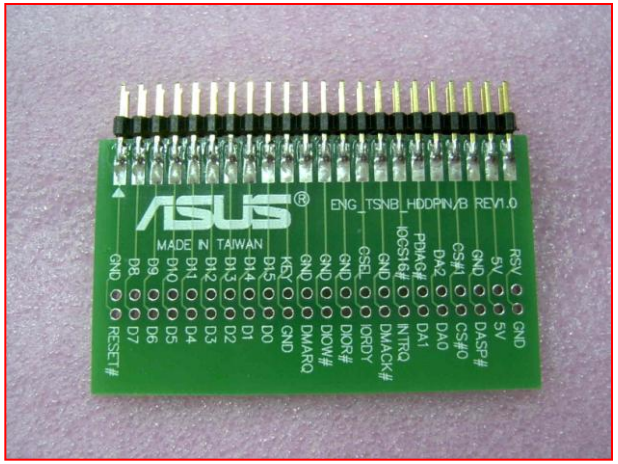
Part Number : 80-C1K050-00A01
Part Name : CSC_NB_DDR3_TEST_TOOL_TOP



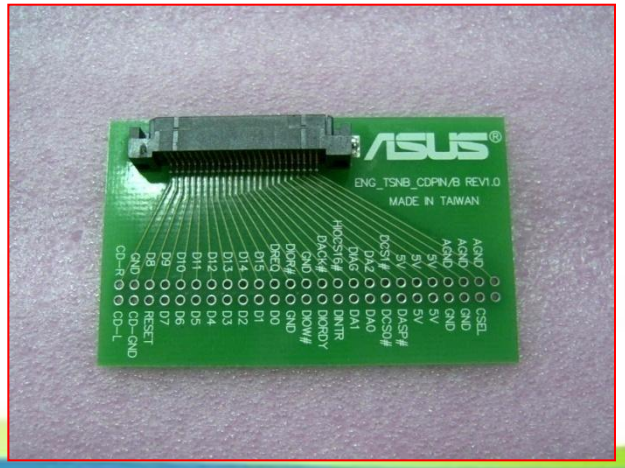
Part Number : 80-C1K040-00A01
Part Name : CSC_NB_DDR3_TEST_TOOL_BOTTOM

Other Signal Measure Fixture tool

Part Number : 60R-R0000170
Part Name : ENG_TSNB_HDDPIN/B REV1.0



Part Number : 60R-R0000160
Part Name : ENG_TSNB_CDPIN/B REV1.0



Chapter 5
EeePC Debug Card Tool

- P701-ISP_CARDPCI SLOT (Bios Flash)
- COM cable
- 28pin FPC Cable(Top-Bottom)
- USB cable
- EC JIG Board

P701-ISP_CARDPCI SLOT (Bios Flash)

Part Number : 60-2OA80827A039
Part Name : P701-ISP_CARD

Part Number : 14G122300281
Part Name :28pin FPC Cable(Top-Bottom)

Part Number :14G010006400SY
Part Name : COM cable

USB cable

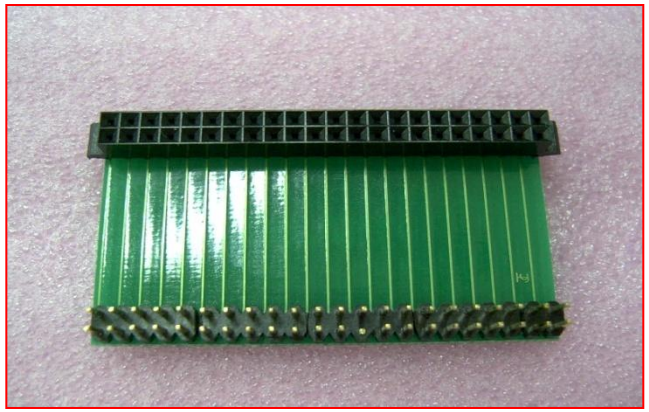
Part Number : 16-TT4700491
Part Name : USB cable

Chapter 6
Other Tool

- ENG_TSNB_IDECON REV1.0
- PCI SLOT Test Tool
- Mini PCI Test Tool
- FFC CABLE 24P 1.0mm
- FFC CABLE 26P 1.0mm
- FFC CABLE 28P 1.0mm
- AC WIRE CABLE

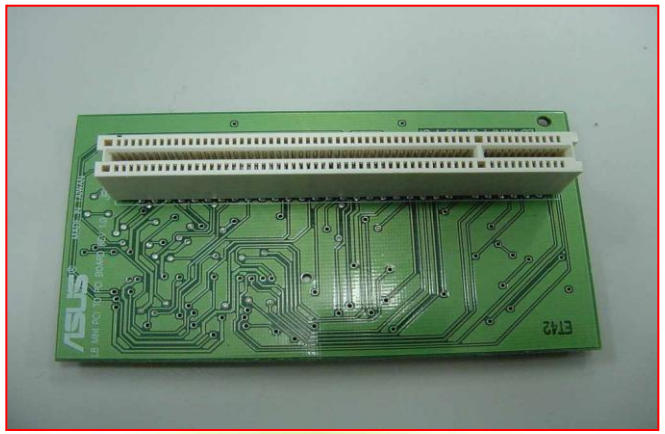
Other Tool

Part Number : 60R-R0000190
Part Name : ENG_TSNB_IDECON REV1.0



Part Number : 60R-R0000100
Part Name : Mini PCI TEST FIXTURE

Part Number : 60R-R0000080
Part Name : PCI SLOT TEST FIXTURE



Other Tool

Part Number : 22-060000482
Part Name : FFC CABLE 24P 1.0mm

Part Number : 22-220000200
Part Name : FFC CABLE 28P 1.0mm

Part Number : 22-060000483
Part Name : FFC CABLE 26P 1.0mm

Part Number : 60R-R0000230
Part Name : AC WIRE CABLE

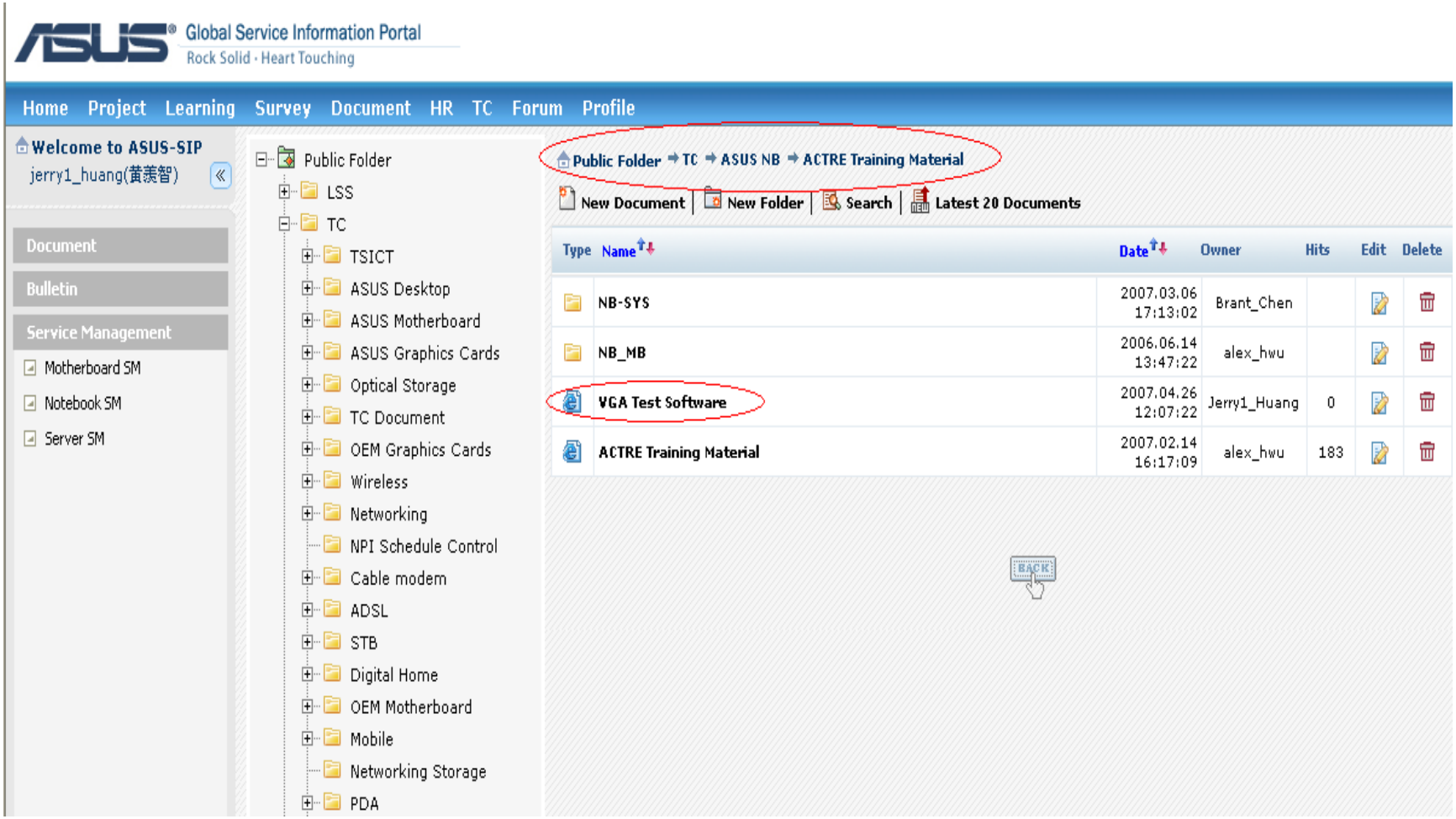
Chapter 7
Test Program and Fixture Tool SOP

- VRAM Test Program SOP
- Eee PC Flash BIOS Tool Operation SOP
- EC JIG Board SOP
- PCI-E Debug Card SOP

VRAM Test Program SOP

Test Step1

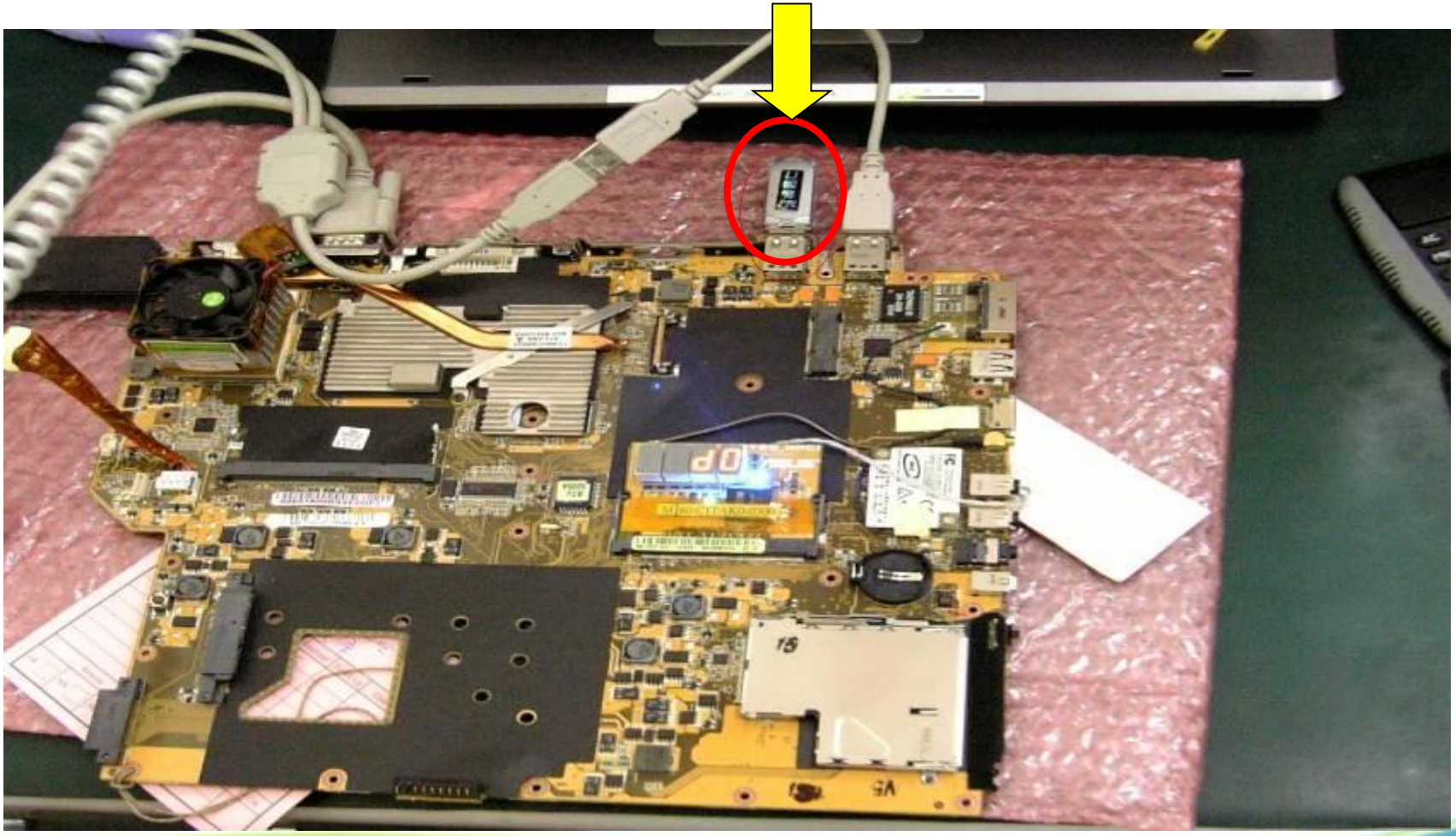
Access http://sip.asus.com download VGA test program.



Test Step 2

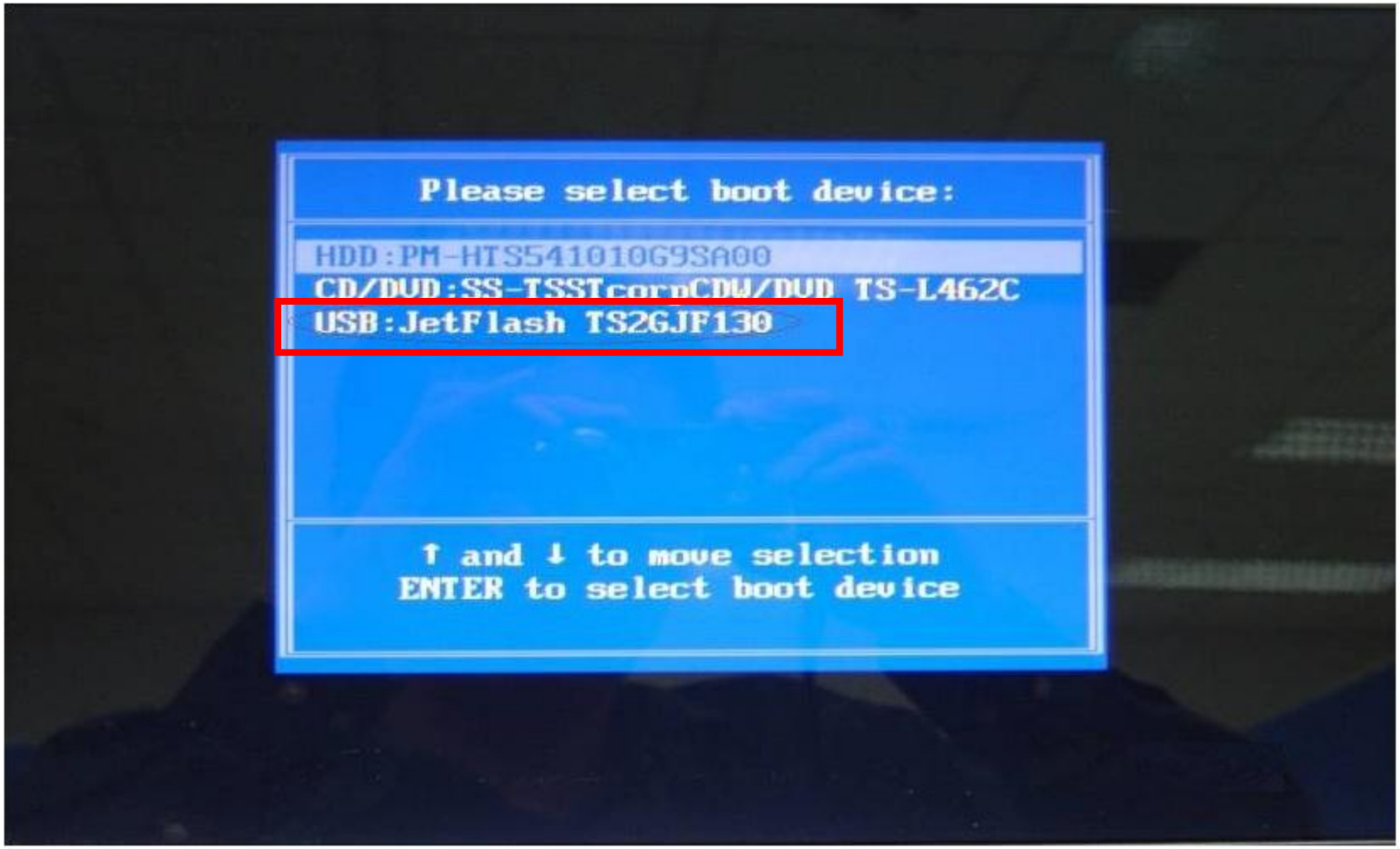
Unzip VGA test program into your AI-flash.

Warning: AI-flash must support booting file.



Test Step 3

Select USB AI-flash Booting。



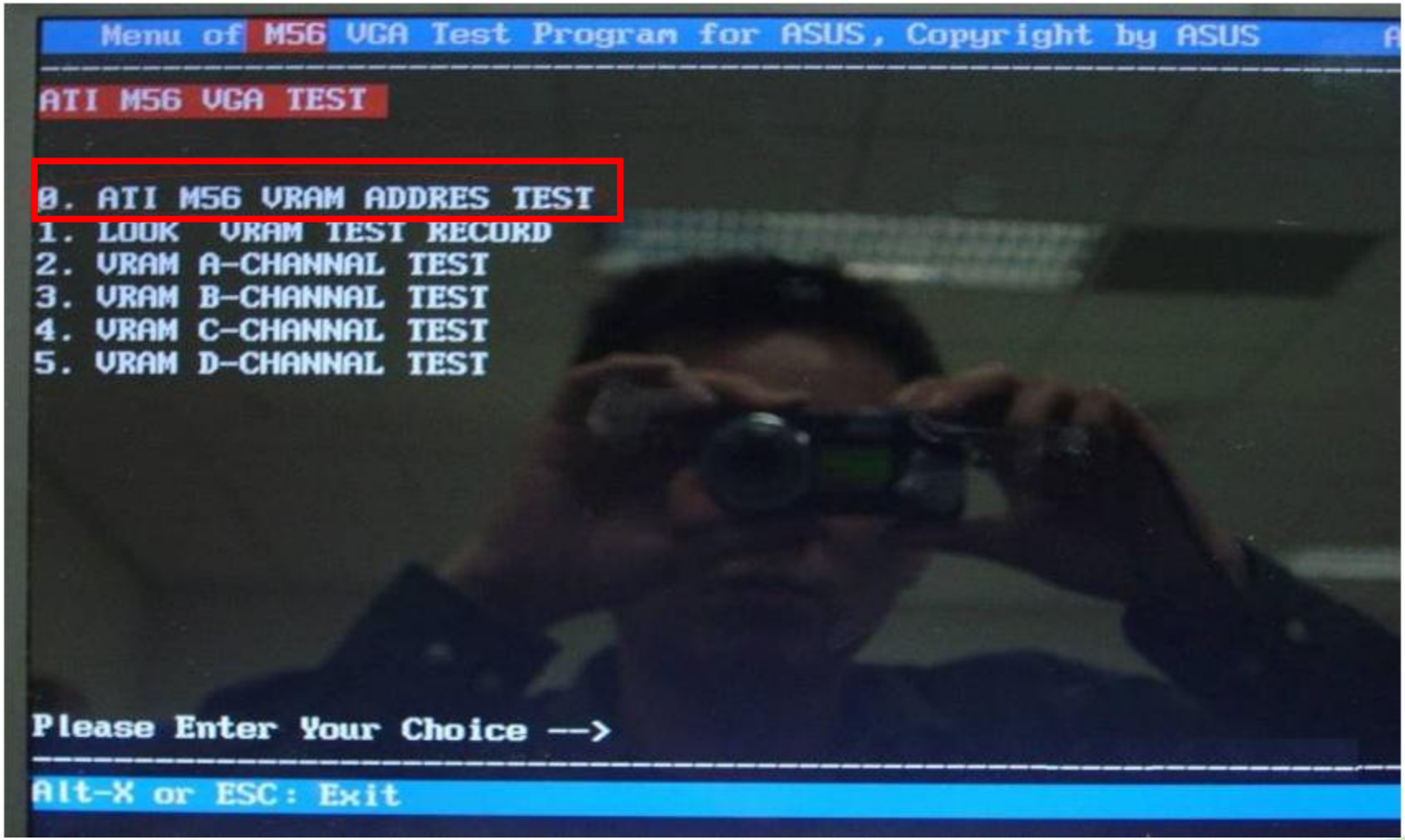
Test Step4

Select M/B VGA chipset type。Ex：A7J select 3

Microsoft Windows 98 Startup Menu
1. ATI M24(X600) V-RAM TEST.
2. ATI M26(X700) V-RAM TEST.
3. ATI M56(X1600) V-RAM TEST .
4. ATI M64 V-RAM TEST.
5. nvidia V-RAM TEST.
Enter a choice: 1
F5=Safe mode Shift+F5=Command prompt Shift+F8=Step-by-step confirm

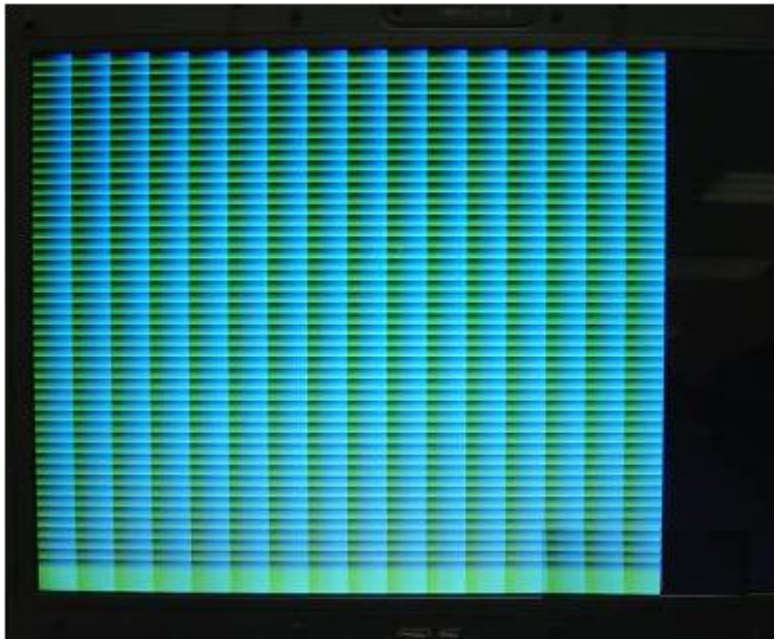
Test step 5

Select 0 into the test program ◦


Menu of M56 VGA Test Program for ASUS, Copyright by ASUS
ATI M56 VGA TEST
0. ATI M56 VRAM ADDRES TEST
1. LOOK VRAM TEST RECORD
2. VRAM A-CHANNAL TEST
3. VRAM B-CHANNAL TEST
4. VRAM C-CHANNAL TEST
5. VRAM D-CHANNAL TEST
Please Enter Your Choice -->
Alt-X or ESC: Exit

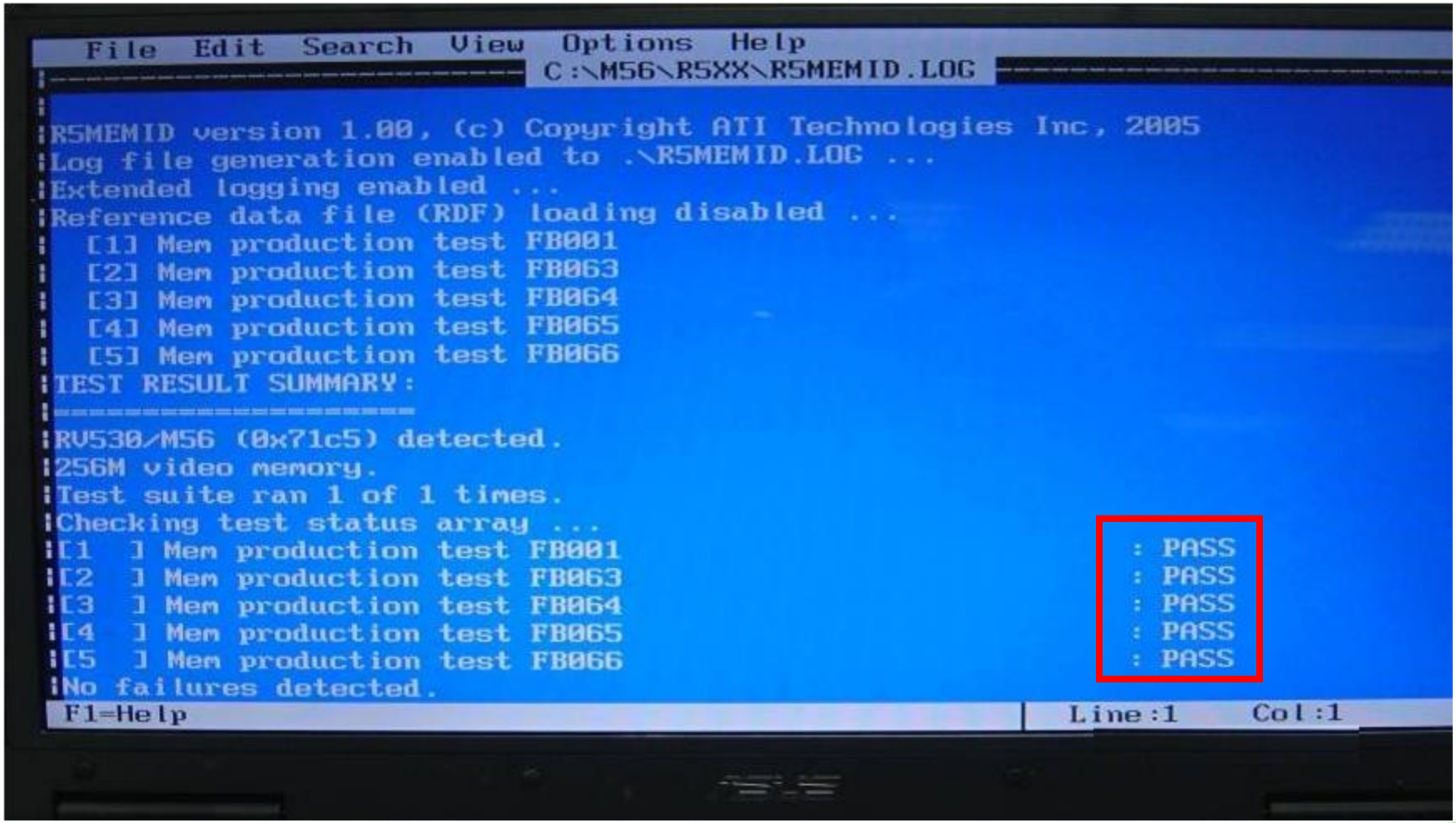
Test step 6

Test during, abnormal line on the screen.



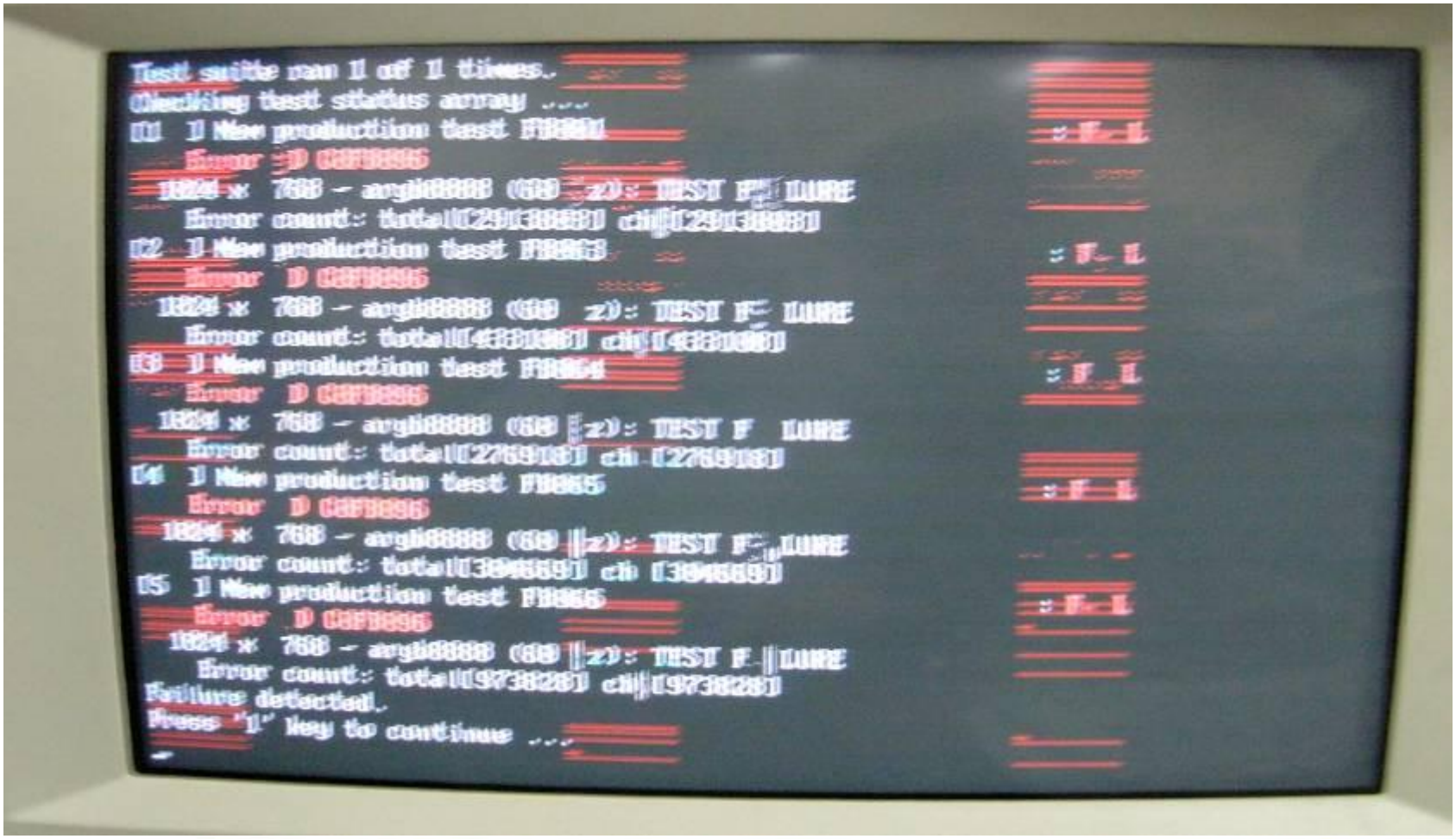
Test Step7

Test Pass


File Edit Search View Options Help
C:\M56\R5XX\R5MEMID.LOG
R5MEMID version 1.00, (c) Copyright ATI Technologies Inc, 2005
Log file generation enabled to .\R5MEMID.LOG ...
Extended logging enabled ...
Reference data file (RDF) loading disabled ...
[1] Mem production test FB001
[2] Mem production test FB063
[3] Mem production test FB064
[4] Mem production test FB065
[5] Mem production test FB066
TEST RESULT SUMMARY:
RV530/M56 (0x71c5) detected.
256M video memory.
Test suite ran 1 of 1 times.
Checking test status array ...
[1] Mem production test FB001 : PASS
[2] Mem production test FB063 : PASS
[3] Mem production test FB064 : PASS
[4] Mem production test FB065 : PASS
[5] Mem production test FB066 : PASS
No failures detected.
F1=Help
Line:1 Col:1

Test step8

Test error message



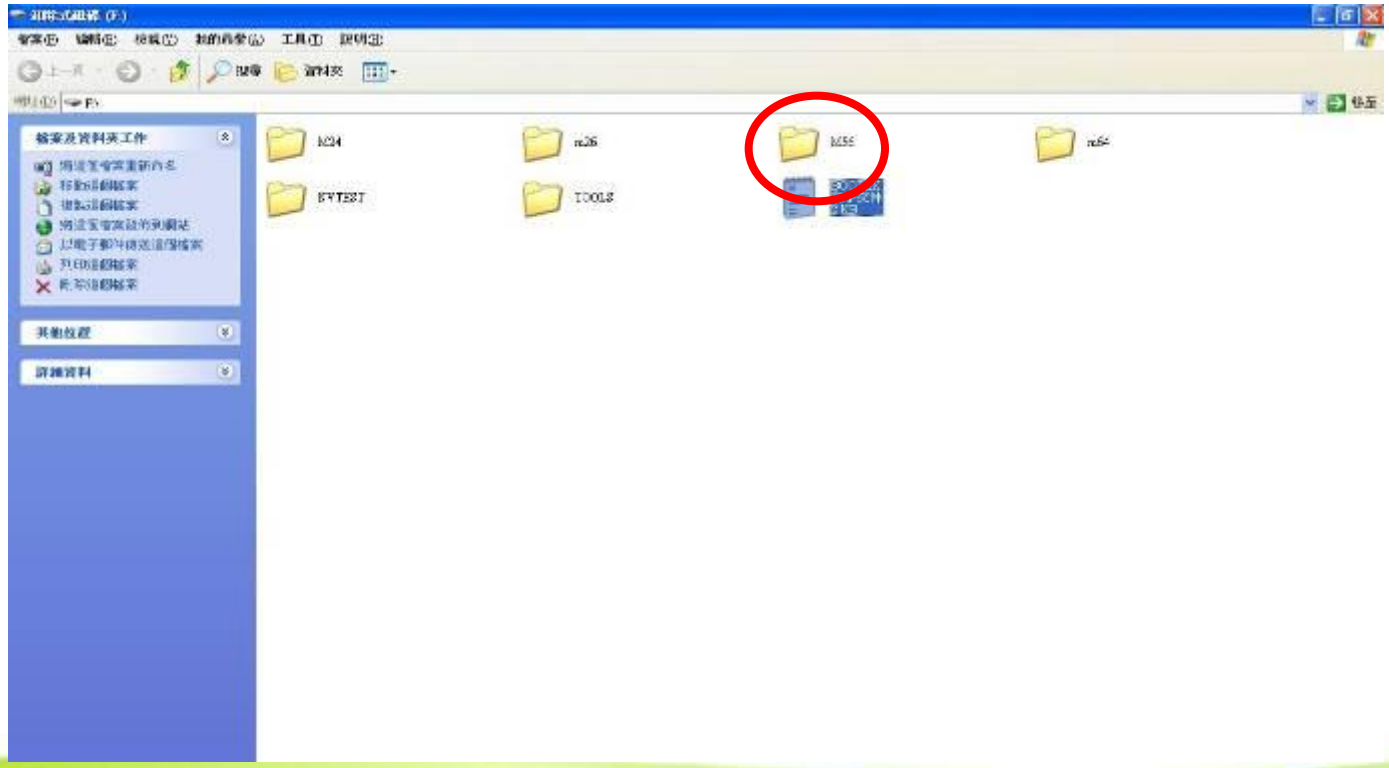
Test step 9-1

If random serious to cause to can not view any message on the screen.

Please follow below step.

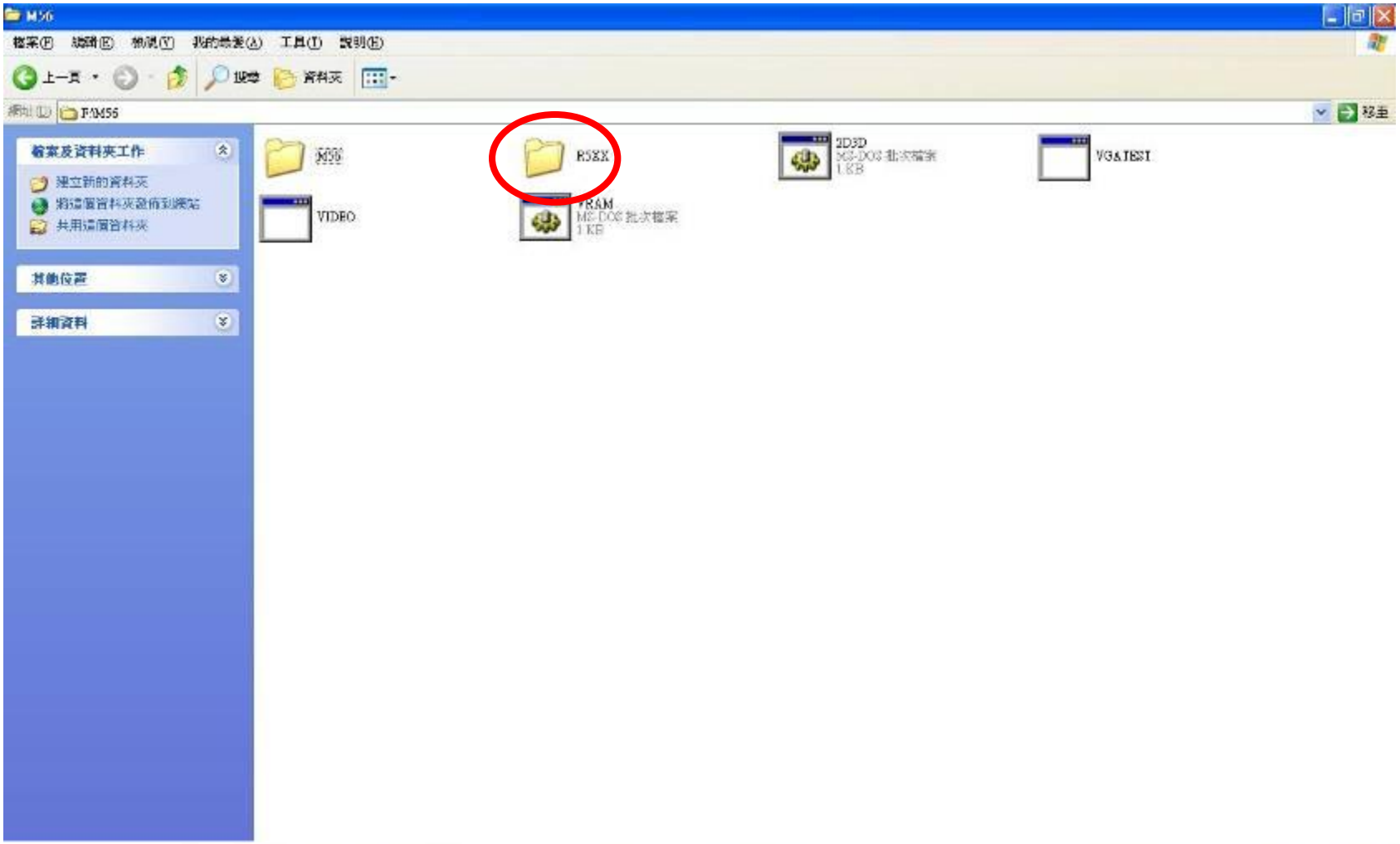
1. When you finish the final test, power off and remove your Ai-flash.
2. Plug in your Ai-flash to normal PC or NB

3.Slecet test model VGA type.Ex:A7J → M56



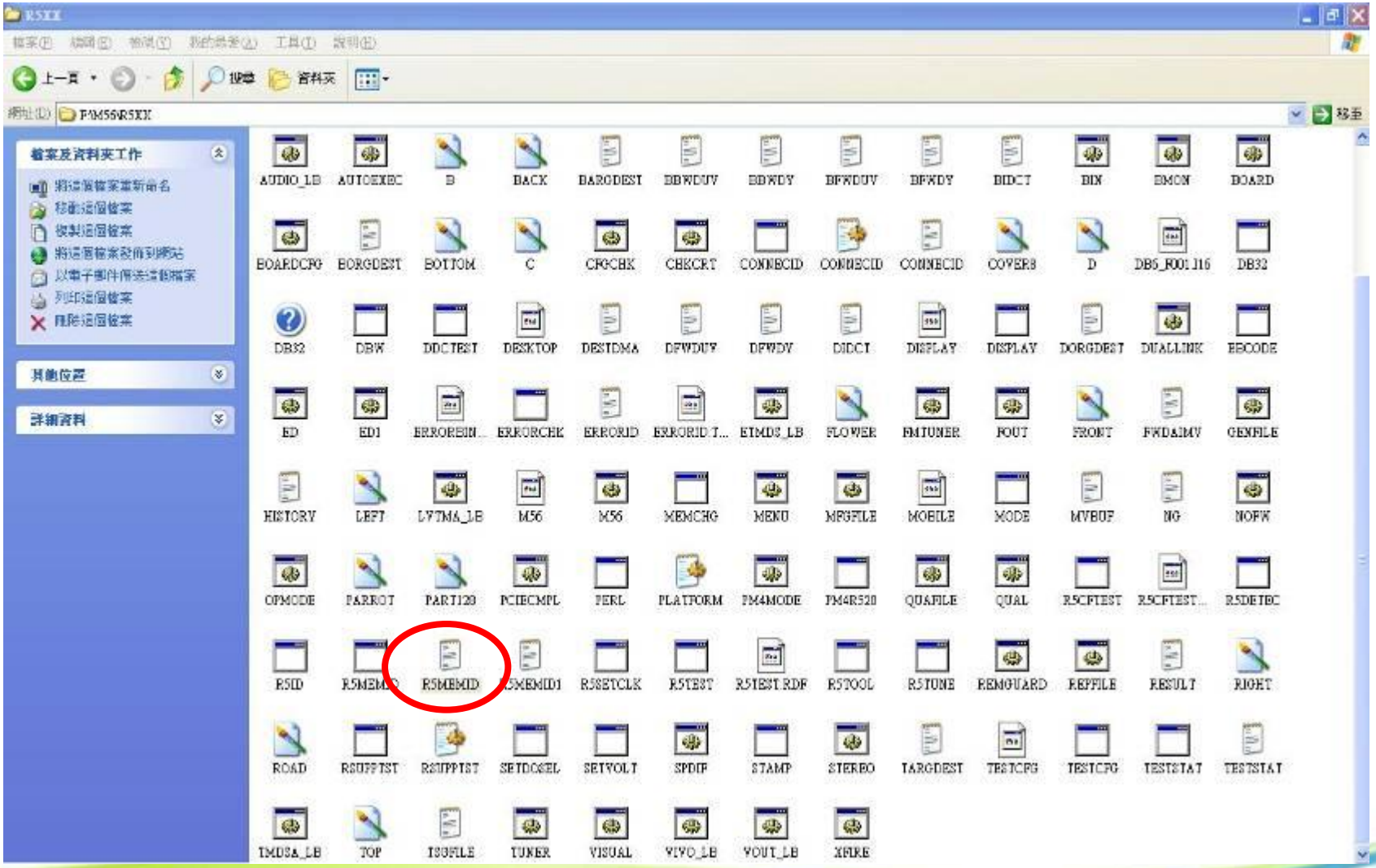
Test Step9-2

4.Slelect R5XX file。



Test step9-3

4.Select R5MEMID（log file）。

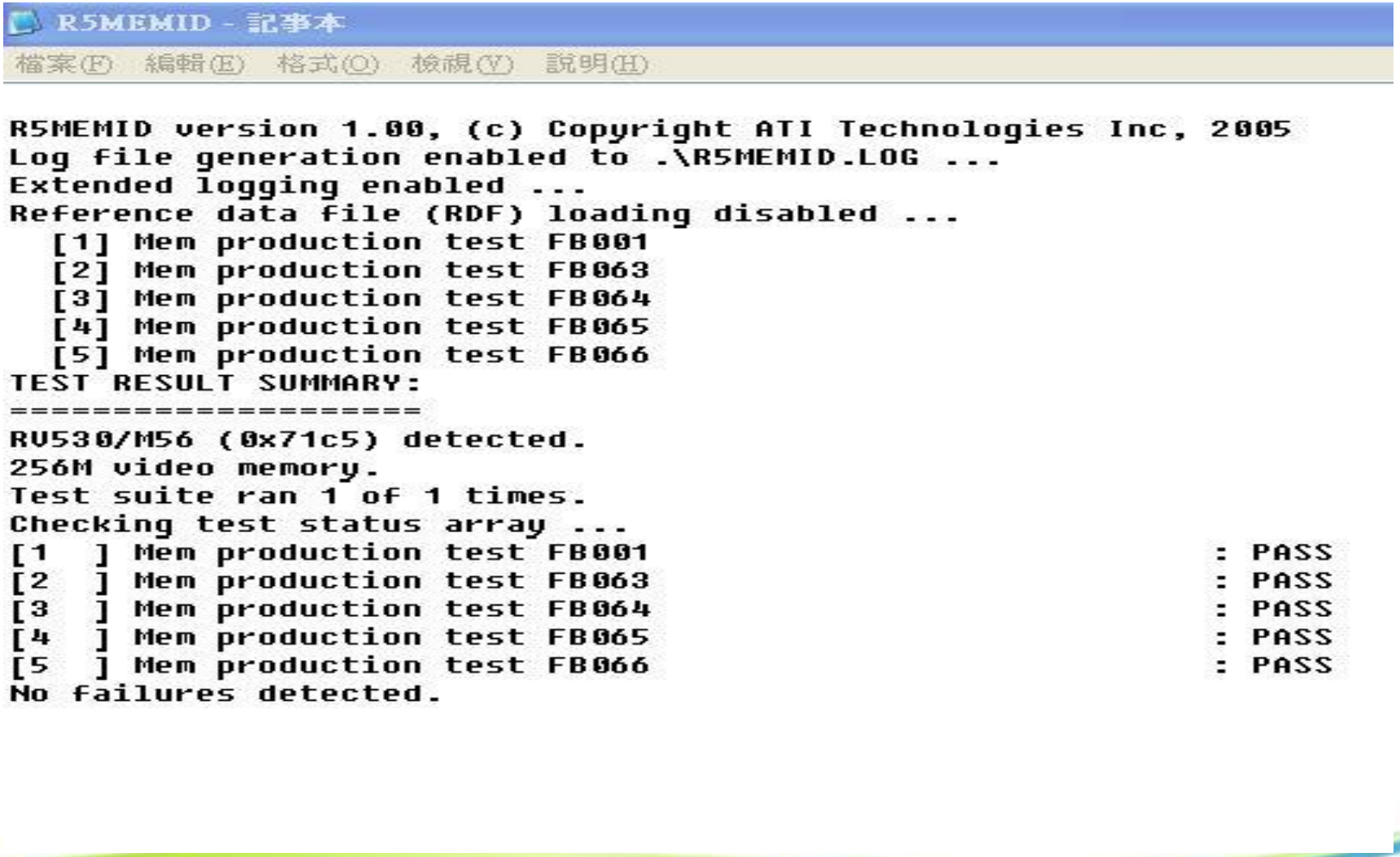


Test Step 9-4

4.Confirm save date is test date.

Test step9-5

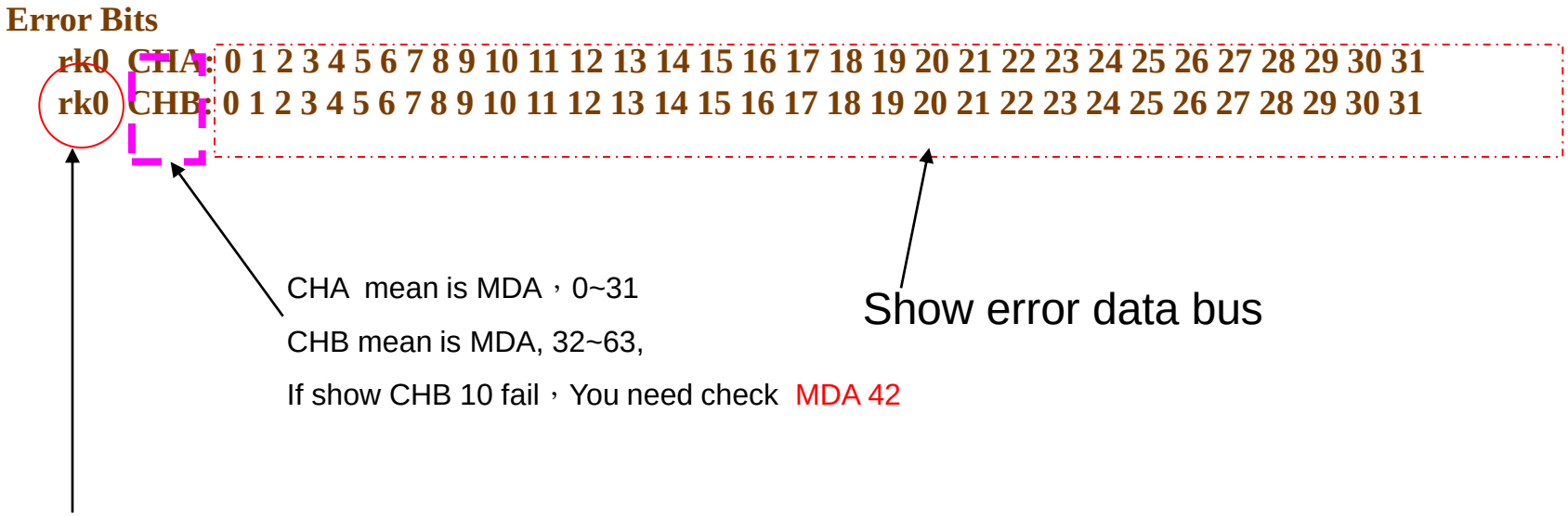
5.Read test message。


R5MEMID - 記事本

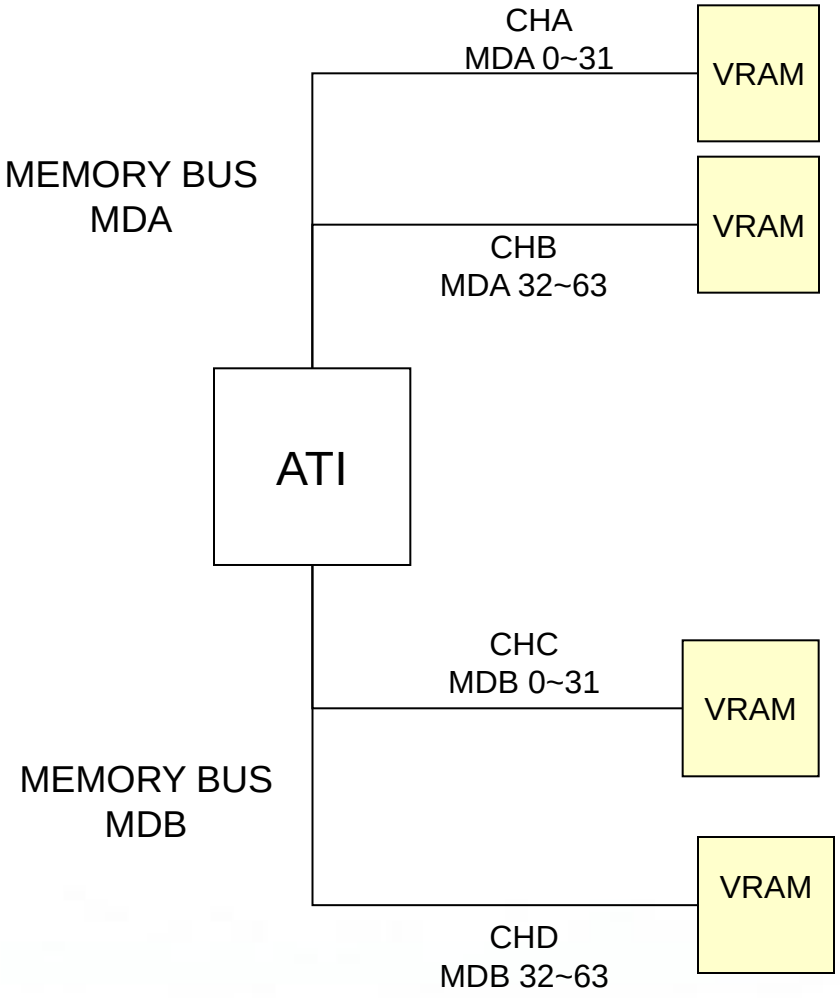
檔案(F) 編輯(E) 格式(O) 檢視(V) 說明(H)

```
R5MEMID version 1.00, (c) Copyright ATI Technologies Inc, 2005
Log file generation enabled to .\R5MEMID.LOG ...
Extended logging enabled ...
Reference data file (RDF) loading disabled ...
   [1] Mem production test FB001
   [2] Mem production test FB063
   [3] Mem production test FB064
   [4] Mem production test FB065
   [5] Mem production test FB066
TEST RESULT SUMMARY:
====================
RV530/M56 (0x71c5) detected.
256M video memory.
Test suite ran 1 of 1 times.
Checking test status array ...
[1   ] Mem production test FB001                                : PASS
[2   ] Mem production test FB063                                : PASS
[3   ] Mem production test FB064                                : PASS
[4   ] Mem production test FB065                                : PASS
[5   ] Mem production test FB066                                : PASS
No failures detected.
```

Error message introduce



VGA Block Diagram



Exemplification

Model:A7J
Error message below：

Error Bits

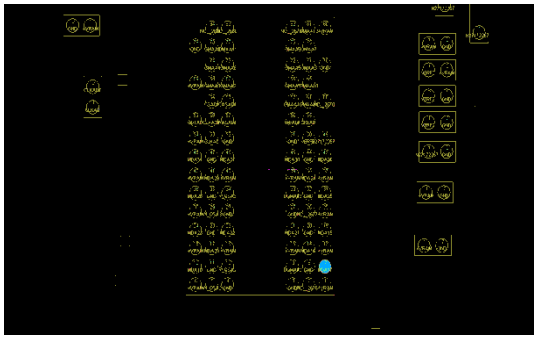
rk0 CHA: 17 23 30
rk0 CHB: 15 24

Memory Data Bus

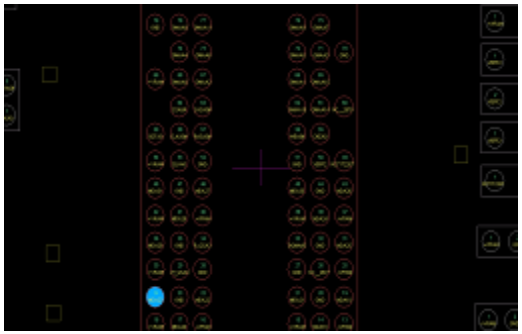
rk0 CHA: 17 23 30 = MDA17, MDA23, MDA30
rk0 CHB: 15 24 = MDA47,MDA56

TSICT

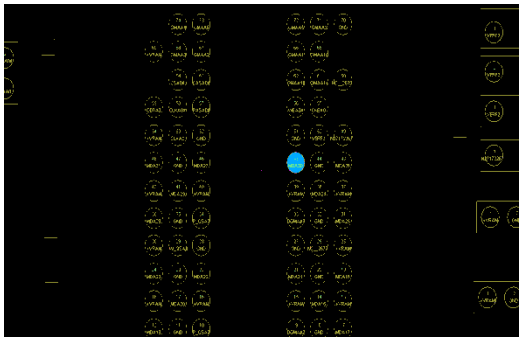
User TSICT Program to check the error data bus location。



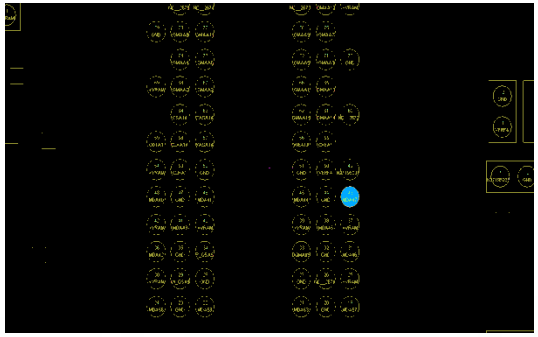
MDA17(U10)



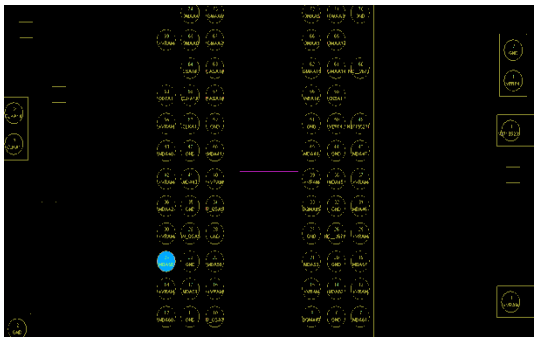
MDA23(U10)



MDA30(U10)



MDA47(U11)

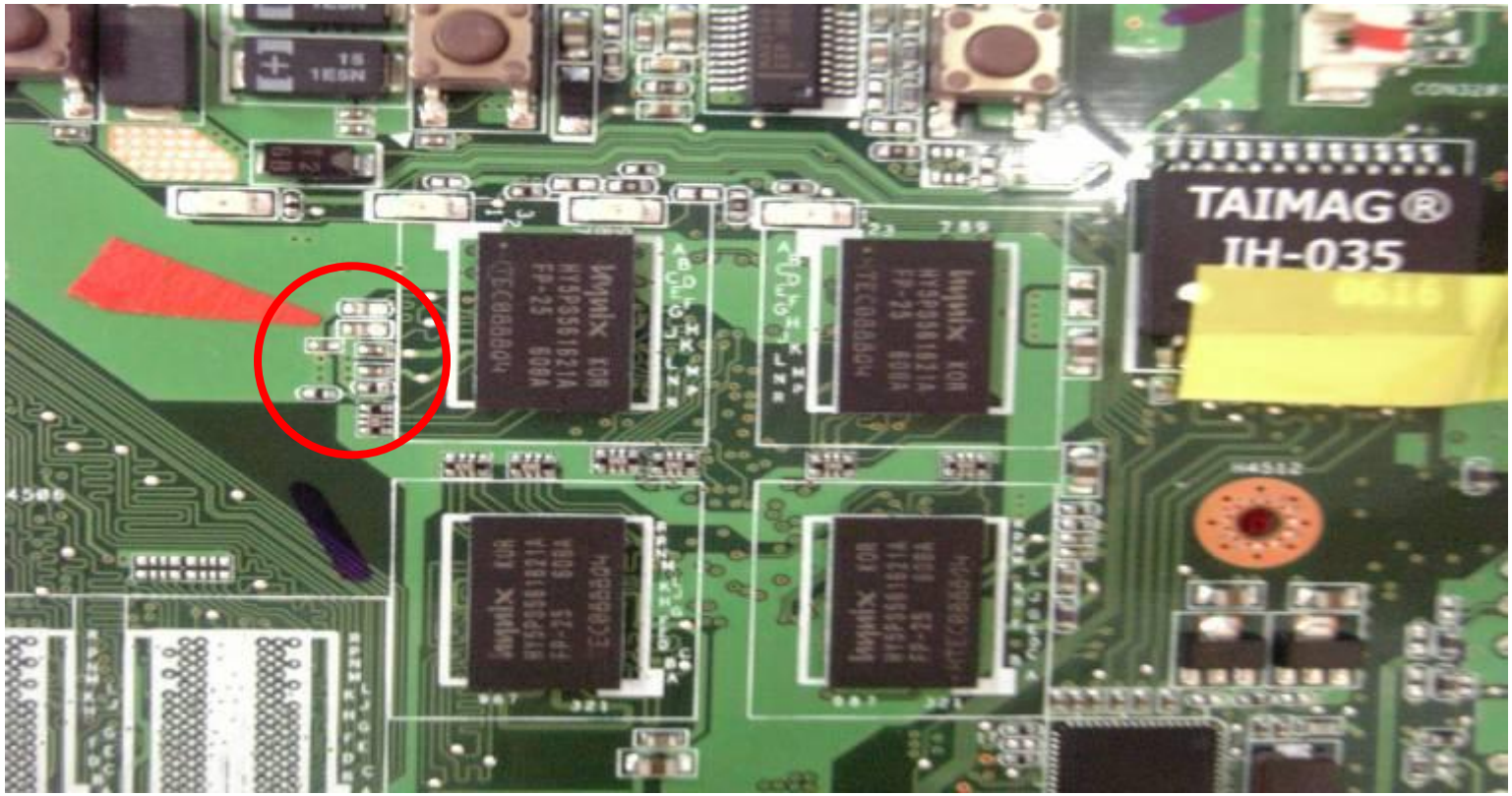


MDA47(U11)

Exchange Bad VRAM chip

Exchange bad VRAM U10 U11.

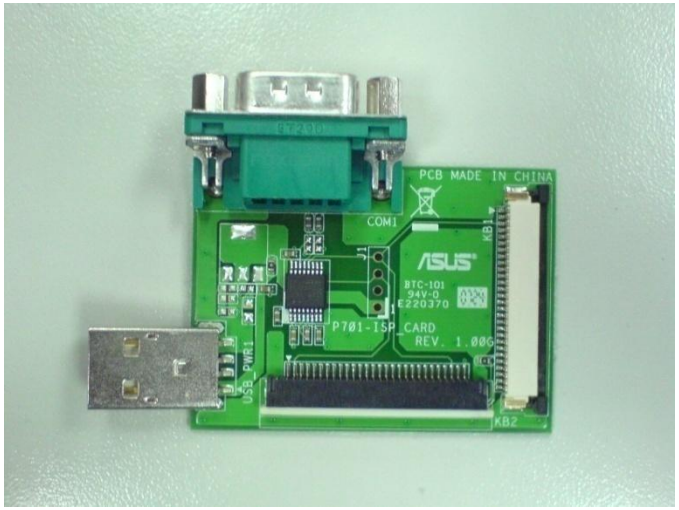
Warming: Exchange VRAM before，Please check component have loss or not near VRMA chip.



Chapter 8 Eee PC Flash BIOS Tool operation SOP

introduce

ENG EC is connected the PC and Eee PC，controlled the program by PC。It should be connected COM cable to PC and KB cable to Eee PC。ENG EC contains 4 ports：2 KB connects， 1 COM port，1 USB port。ENG EC is depicted the photo below。

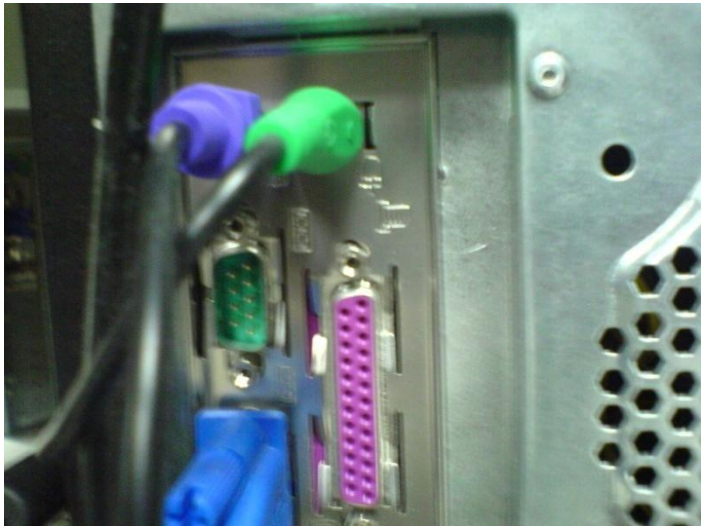


The ENG EC's power supply by 2 USB port，COM port is communication the PC and ENG EC between，KB connect have support power supply and communication。

Preparations 1

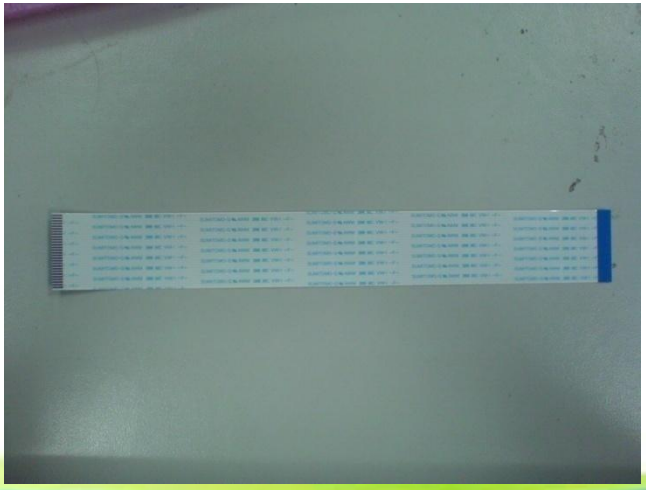
Tools and cables are needed as shown of the pictures below:

- One PC with COM Port



- ENG EC and cables (KB cable , COM cable and USB cable)

1.KB cable



Preparations 2

2.COM cable

There are two kinds of COM cables, direct link and cross link:

Please make sure the cable adopted is direct link type, otherwise FLASH BIOS can not be continued.

COM cable should be direct linked type.

Preparations 3

3.USB cable

- One Eee PC to flash BIOS.
- Program for Flashing BIOS should be installed on PC.

Connection 1

- Connect ENG EC to PC via USB cable

Plug ENG EC directly to PC is also feasible

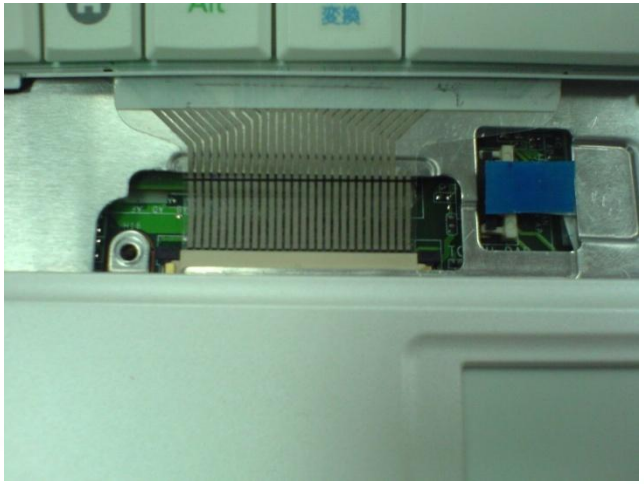
Connection 2

- Make a connection between ENG EC and PC via COM cable

- Connect KB cable to Eee PC

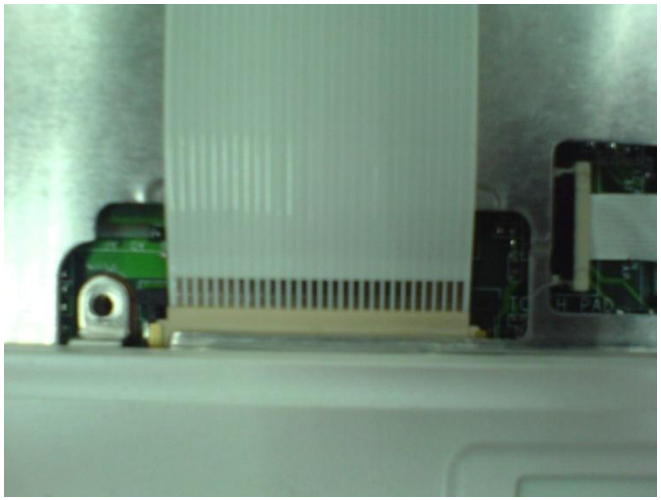
(NOTICE: Please make sure both Adaptor and Battery are removed from Eee PC before connecting KB cable)

Remove Keyboard from Eee PC and unplug KB cable



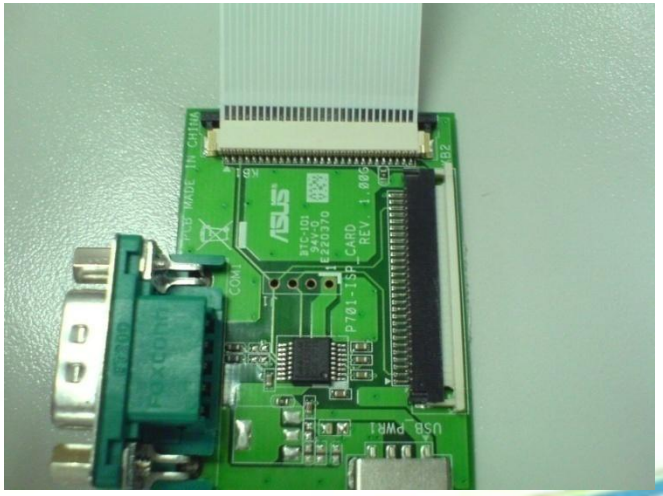
Connection 3

Connect KB cable to keyboard,
(Please notice the cable direction)



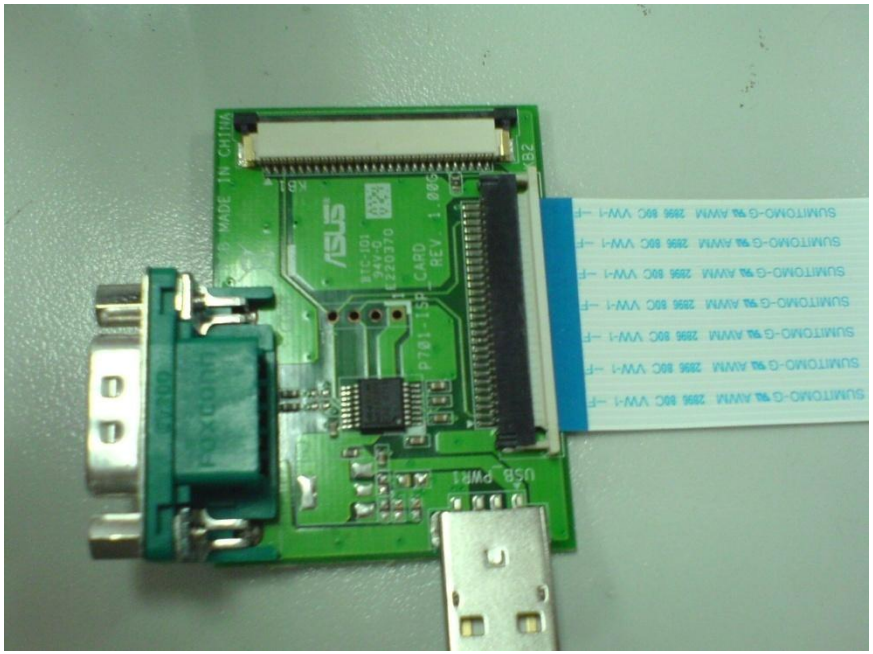
The other side of KB cable should be connected to ENG EC

Please notice the difference between the
two KB connectors when connecting KB cable



Connection 4

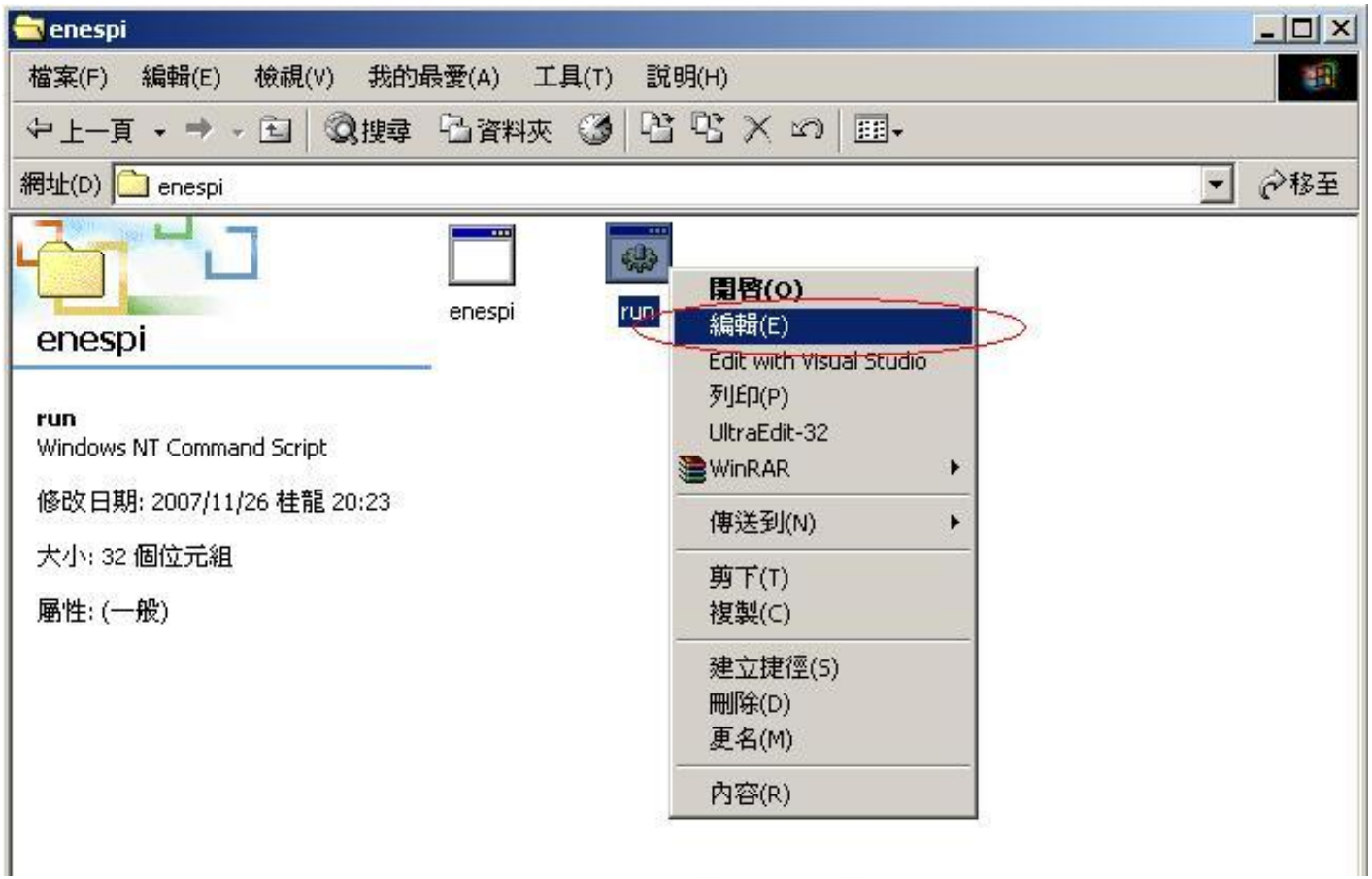
KB cable is often connected as the picture shows below



Finally please check all connections, and power on Eee PC
(Either by Adaptor or Battery)

FLASH BIOS 1

Copy FLASH BIOS program to OA
Right click run.cmd and edit



FLASH BIOS 2

Type parameters into run.cmd

Explanation: -C1 for COM1 port, -C2 for COM2 port set the parameter due to the actua COM port that connected

-S115, Set bit rate, DO NOT alter it

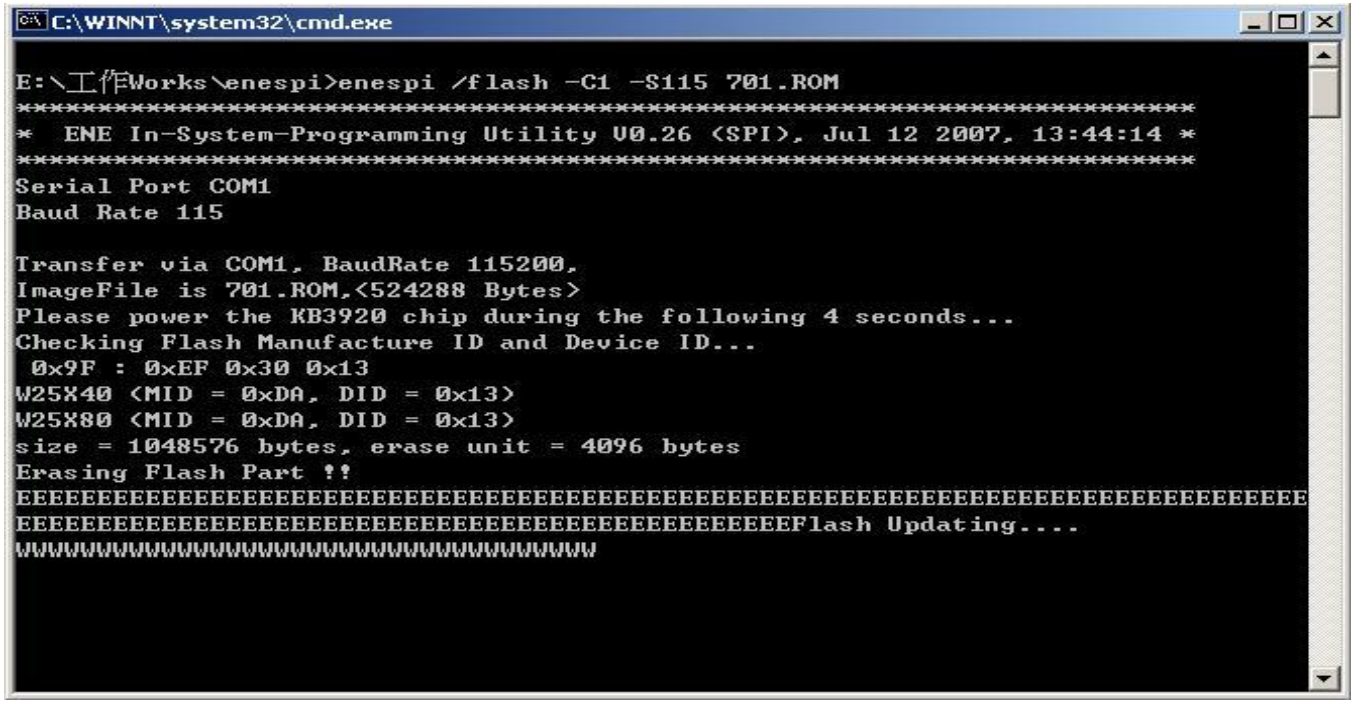
701.ROM, file name of ROM image, type the full file name include suffix

NOTICE: Please put ROM image, enespi.exe and run.cmd in one same folder.

If you typed the incorrect COM port parameter or the ROM image name and still executed run.cmd, the dialog window would be disappeared after a sudden flash.

FLASH BIOS 3

After checking the parameter, execute run.cmd, you can start FLASH BIOS, the window would be shown as the picture below


C:\WINNT\system32\cmd.exe
E:\工作Works\enespi>enespi /flash -C1 -S115 701.ROM
* ENE In-System-Programming Utility V0.26 (SPI), Jul 12 2007, 13:44:14 *
Serial Port COM1
Baud Rate 115
Transfer via COM1, BaudRate 115200,
ImageFile is 701.ROM,<524288 Bytes>
Please power the KB3920 chip during the following 4 seconds...
Checking Flash Manufacture ID and Device ID...
0x9F : 0xEF 0x30 0x13
W25X40 (MID = 0xDA, DID = 0x13)
W25X80 (MID = 0xDA, DID = 0x13)
size = 1048576 bytes, erase unit = 4096 bytes
Erasing Flash Part !!
Flash Updating....

When FLASH completed, the window would be disappeared.

NOTICE: IF you found the system halts at “Checking Flash Manufacture ID and Device ID…”,or it didn’t respond for a long period at “WWWW…”. Please check the USB and KB cable are well connected (remove adaptor and battery of Eee PC before unplug KB cable).

Wait until upgrade complete and remove adaptor and battery

NOTICE:DO NOT remove power when FLASHING BIOS.

When FLASHING completed, power should be cut off firstly for Eee PC (Remove both adaptor and battery), then unplug KB cable.

Problem Analysis

When FLASH BIOS completed, if POWER LED doesn’t light in power on, BIOS was not correctly flashed, please FLASH BIOS again.
If POWER LED and WIFI LED are both on, clear CMOS,
if the issue still existed, please FLASH BIOS again.

Chapter 9 EC JIG_BOARD3

JIG 3

User Manual

Released by : Michael1 Zhang
GRMA

Revision 1.0.1.3
April 7, 2011

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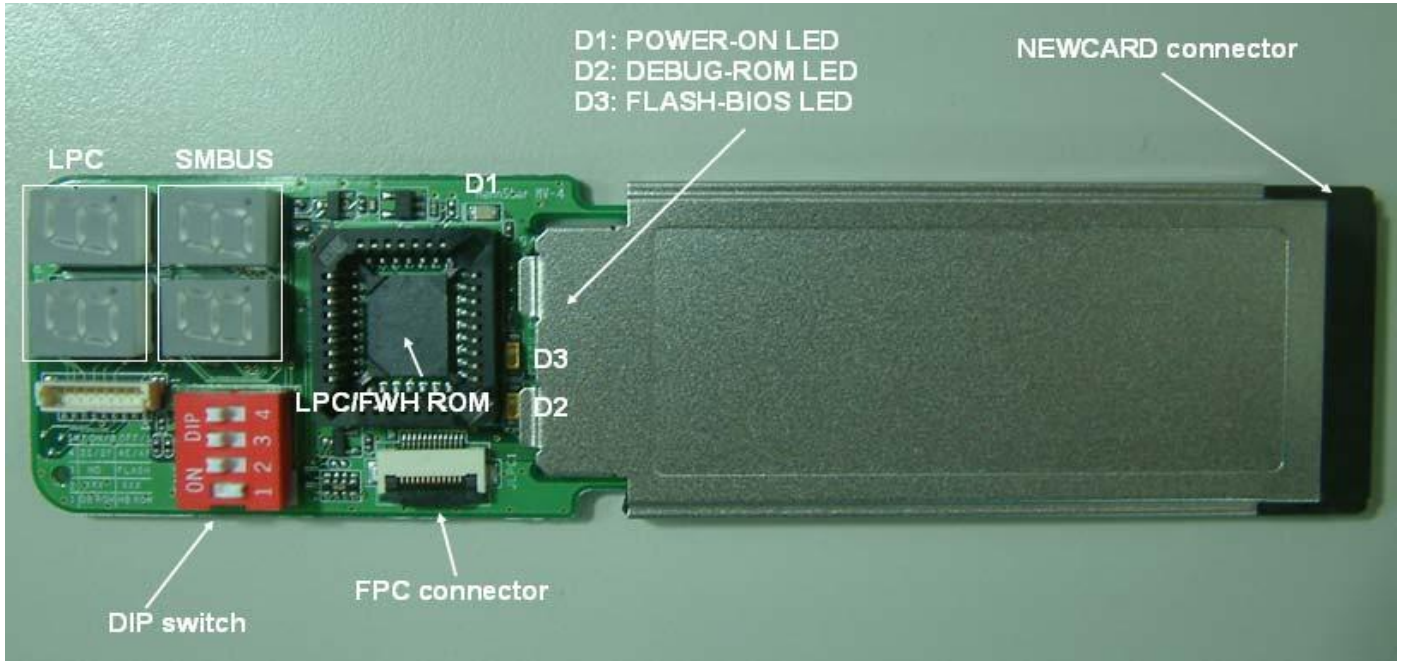
Chapter 10 New Card Debug Card SOP

New Card Debug Card Function Introduction



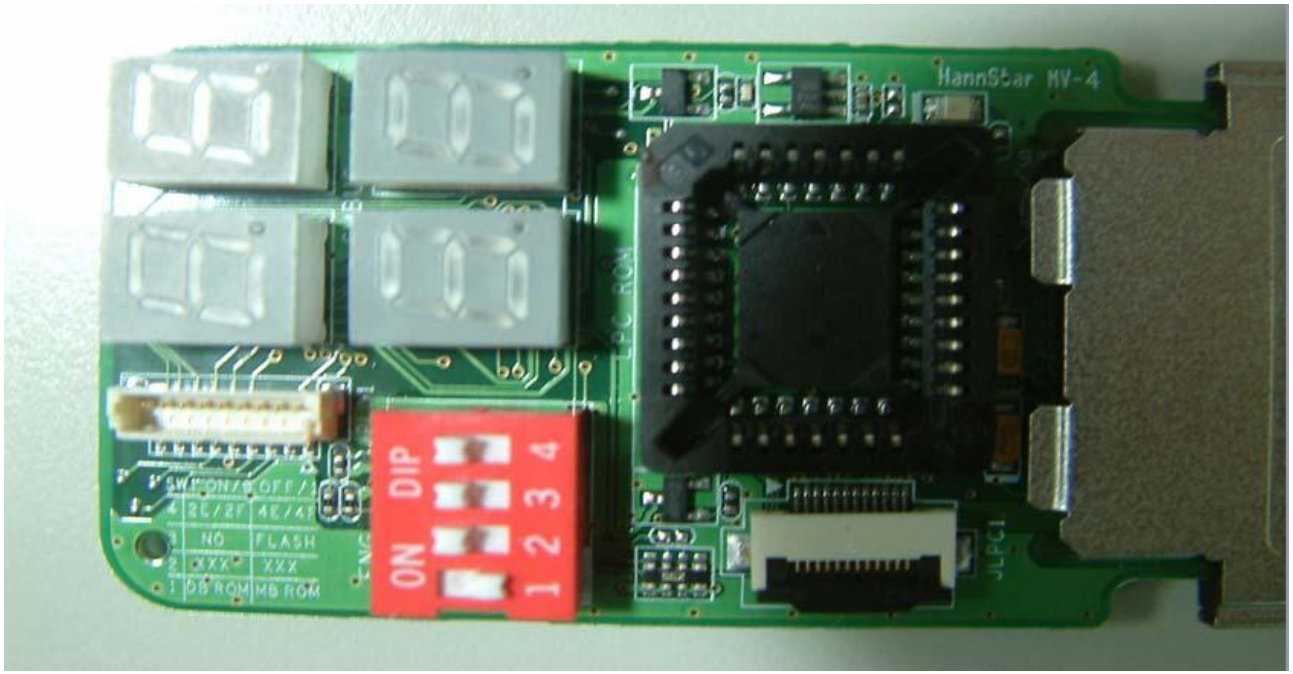
1.If M/B reserved the NEWCARD debug circuit, then we can use Newcard connector to show post code via LPC or SMBUS interface (Priority: LPC>SMBUS)

2.If M/B reserved the LPC circuit to 12P FPC connector, then we can use 12P FFC cable to connector Newcard Debug card and show post code via LPC interface.

3.If M/B didn't reserved debug circuit, then we can only use Newcard connector to show post code via SMBUS interface.

Note: ASUS BIOS support SMBUS post code after Intel Santa Rosa platform.

New Card Debug Card Operation Introduction



1.DIP switch Function:

	ON	OFF
SW1	Boot with Debugcard's ROM	Boot with M/B's ROM
SW2	Reserved	Reserved
SW3	Don't Flash BIOS	Flash BIOS (ps:1)
SW4	Choose SIO 2E/2F	Choose SIO 4E/4F (ps2)

ps1: debug card must have LPC/FWH ROM with BIOS code.

ps2: Choose SIO address , avoiding the confliction with M/B SIO address.

2. LPC/FWH ROM connector: Socket for LPC/FWH ROM(Can't use ISA ROM)

3. LED function:

POWER-ON LED (When +3v is available, LED turn ON)

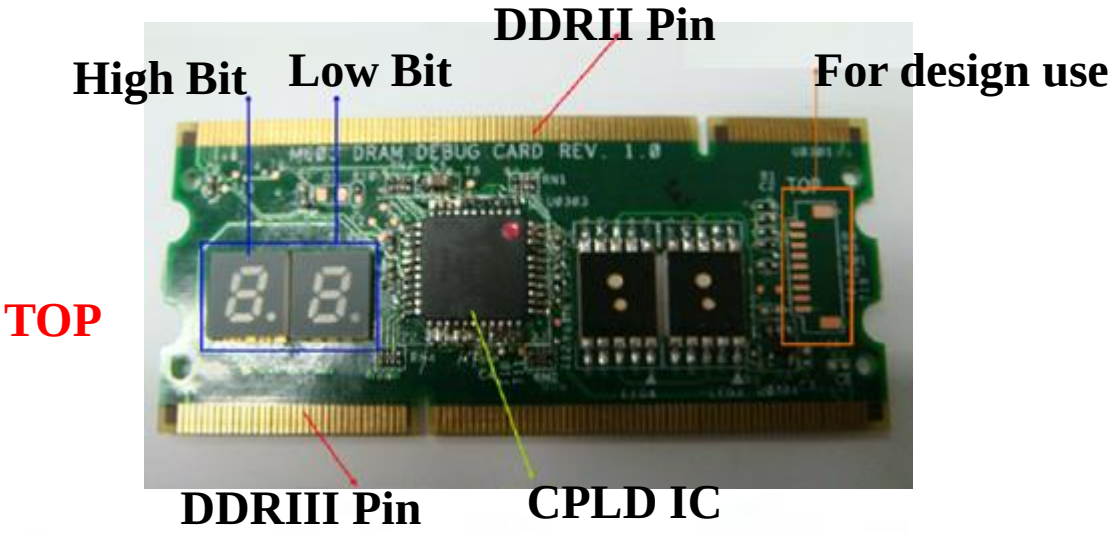
Debug ROM LED (When switch1 ON, LED turn ON)

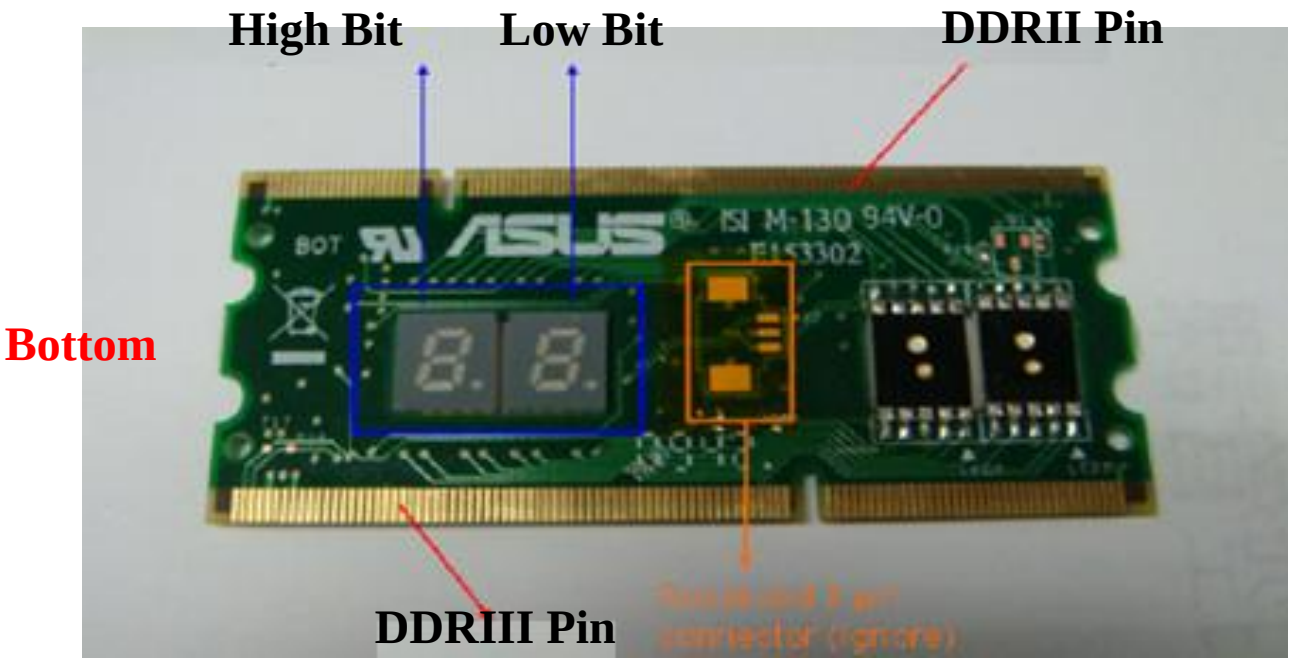
FLASH BIOS LED (When switch3 ON, LED turn ON)

Chapter11 NB DRAM DEBUG CARD SOP

SO-DIMM Debug Card user guide R1.0

SO-DIMM Debug Card with the SMBUS interface debug card(The funtion is the same with Newcard Debug card via SMbus interface),It provides two type ---DDRII&DDRIII, when you use it, please plug it in the SO-DIM socket.About it's component intorduction is below the photo . When Debug card show "00", please ask BIOS RD to check if the program code of SMBUS interface debug is supported this model or not.





SO-DIMM Debug Card introduce of light

Please look below of photo,the one DIMM socket plug in the DDR3 Memory, other DIMM socket plug in the SO-DIMM Debug Card.Pwoert after,you can find it show "15"--->"4F"---->"b2"----->"92"---->"A0"---->"A9" and stop at "Ab" then boot.

BOT
ASUS
ISI M-130 94V-0
E153302
1 5

圖 3

BOT
ASUS
ISI M-130 94V-0
E153302
9 A
PN:60-NZAMB1500-A11IL30JT (0207A)10476230
PT:N0AS1013MB0187268
485B393D288A

圖 4

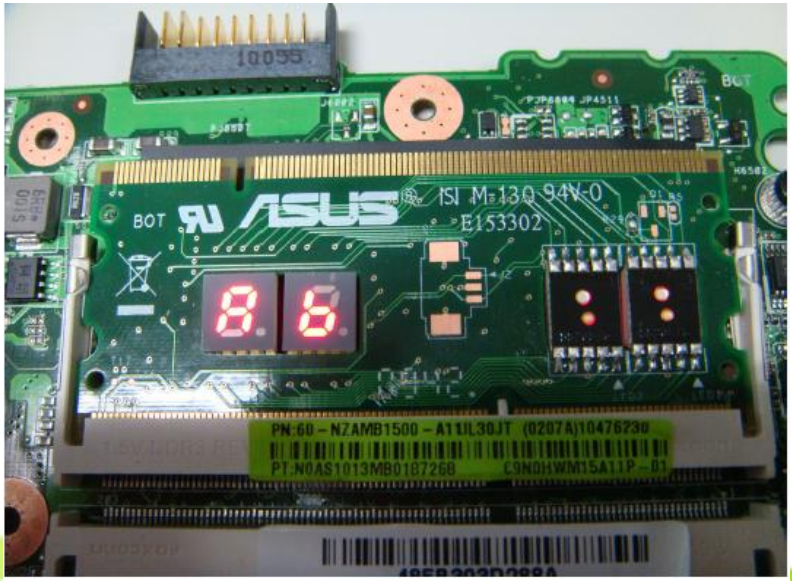

BOT
ASUS
ISI M-130 94V-0
E153302
8 6
PN:60-NZAMB1500-A11IL30JT (0207A)10476230
PT:N0AS1013MB0187268

圖 5

Chapter 12 On Board Memory Test SOP

On Board Memory Test SOP

- This test program can test on board memory.
- There are two test mode:

1. On board memory fail causes NB can’t boot (only for K40IJ,K50IJ)
2. NB can boot

On Board Memory Test SOP

1. If on board memory fail causes NB can't boot

STEP1: Flash BIOS

STEP2: Some model don't have debug card connector.(eg.K50IJ MB R2.1), so you need to weld the connector, the PN is below:
12G18330120A FPC CON 12P,0.5mm,S/T,SMT JST/12FLT-SM2-TB(LF)(SN)

STEP3: Please insert the debug card and boot up

On Board Memory Test SOP

STEP4: Check the debug code, please exchange the RAM chip as below table (eg. If debug code is 29, please exchange U2302). If debug code is AA or 88, it means the memory is good, please wait the confirmation ended (about 10 minutes).

Debug Code	00,10,20,30 08,18,28,38	01,11,21,31 09,19,29,39	02,12,22,32 0A,1A,2A,3A	03,13,23,33 0B,1B,2B,3B
Location	U2301	U2302	U2303	U2304
Debug Code	40,50,60,70,80,90,A0, B0,C0,D0,E0,F0 48,58,68,78,98,A8,B8, C8,D8,E8,F8	41,51,61,71,81,91,A1, B1,C1,D1,E1,F1 49,59,69,79,89,99,A9, B9,C9,D9,E9,F9	42,52,62,72,82,92,A2,B2 ,C2,D2,E2,F2 4A,5A,6A,7A,8A,9A,BA,C A,DA,EA,FA	43,53,63,73,83,93,A3,B3 ,C3,D3,E3,F3 4B,5B,6B,7B,8B,9B,AB, BB,CB,DB,EB,FB
Location	U2401	U2402	U2403	U2404
Debug Code	04,14,24,34 0C,1C,2C,3C	05,15,25,35 0D,1D,2D,3D	06,16,26,36 0E,1E,2E,3E	07,17,27,37 0F,1F,2F,3F
Location	U2305	U2306	U2307	U2308
Debug Code	44,54,64,74,84,94,A4, B4,C4,D4,E4,F4 4C,5C,6C,7C,8C,9C,A C,BC,CC,DC,EC,FC	45,55,65,75,85,95,A5, B5,C5,D5,E5,F5 4D,5D,6D,7D,8D,9D,A D,BD,CD,DD,ED,FD	46,56,66,76,86,96,A6,B6 ,C6,D6,E6,F6 4E,5E,6E,7E,8E,9E,AE, BE,CE,DE,EE,FE	47,57,67,77,87,97,A7,B7 ,C7,D7,E7,F7 4F,5F,6F,7F,8F,9F,AF,B F,CF,DF,EF,FF
Location	U2405	U2406	U2407	U2408

On Board Memory Test SOP

STEP5: There are two kinds of memory chip that we used, NANYA and SAMSUNG, please note which kind you want exchange, the PN is below

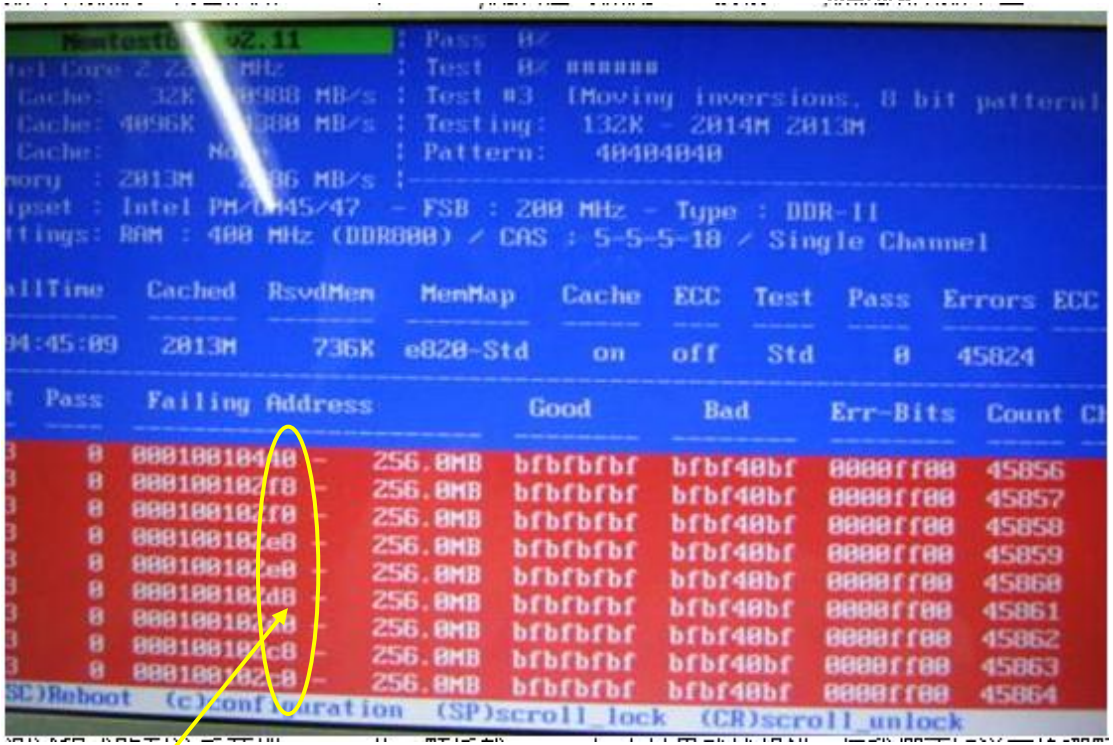
NANYA	03G15162F210
SAMSUNG	03G15162F311

STEP6: Flash the original BIOS

On Board Memory Test SOP

2. If the NB can boot up,

STEP1: Please run mt211.exe in DOS. → Mt211.rar

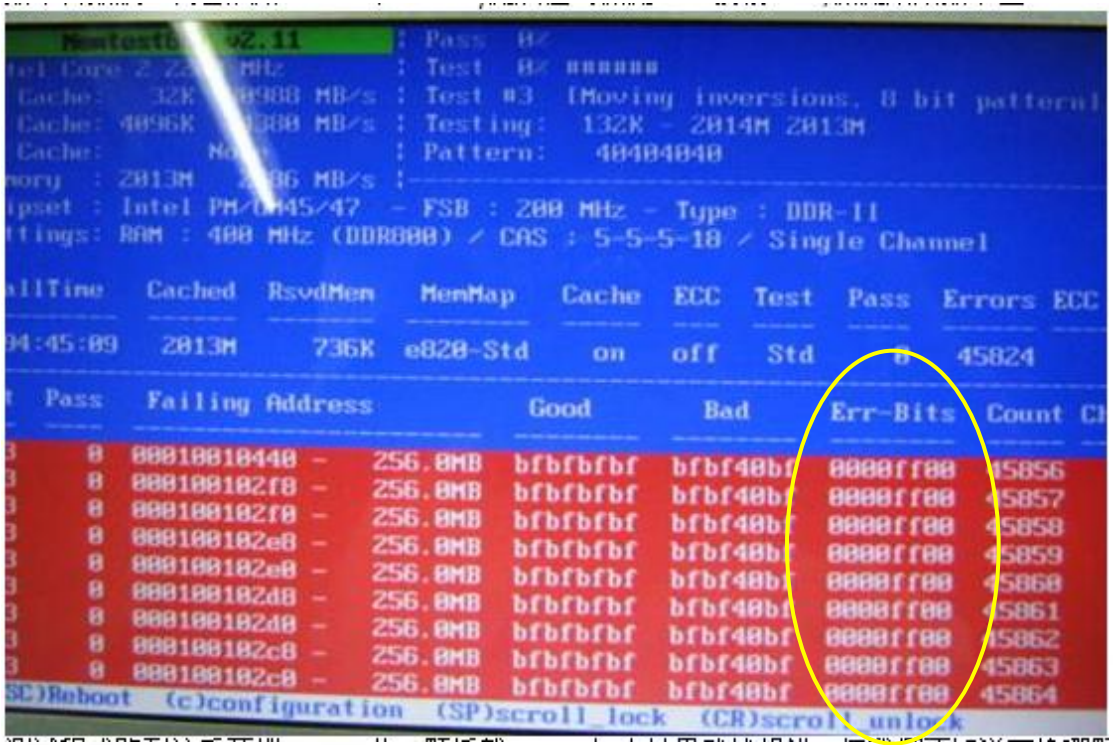

Pass 8/
Test 8/ ######
Test #3 [Moving inversions, 8 bit pattern]
Testing: 132K - 2014M 2013M
Pattern: 40404040
FSB : 200 MHz - Type : DDR-II
CAS : 5-5-5-18 / Single Channel
AllTime Cached RsvdMem MemMap Cache ECC Test Pass Errors ECC
04:45:09 2013M 736K e820-Std on off Std 0 45824
Pass Failing Address Good Bad Err-Bits Count
0 256.0MB bfbfbfbf bfbf40bf 0000ff00 45856
0 256.0MB bfbfbfbf bfbf40bf 0000ff00 45857
0 256.0MB bfbfbfbf bfbf40bf 0000ff00 45858
0 256.0MB bfbfbfbf bfbf40bf 0000ff00 45859
0 256.0MB bfbfbfbf bfbf40bf 0000ff00 45860
0 256.0MB bfbfbfbf bfbf40bf 0000ff00 45861
0 256.0MB bfbfbfbf bfbf40bf 0000ff00 45862
0 256.0MB bfbfbfbf bfbf40bf 0000ff00 45863
0 256.0MB bfbfbfbf bfbf40bf 0000ff00 45864
(SP)scroll_lock (CR)scroll_unlock

To take K40IJ,K50IJ for an example: One DIMM have 64DQ, please check the last bit of failing address first, if the last bit is 0 or 8, the failing address is DQ 0~31 group, if 4 or C, is DQ 32~63 group.

On Board Memory Test SOP

The next, you need to check the Err-Bits, 0000ff00=0000,0000,0000,0000,1111,1111,0000,0000, refer to below table, Err-Bits is 8~15

28~31	24~27	20~23	16~19	12~15	8~11	4~7	0~3
0000	0000	0000	0000	1111	1111	0000	0000

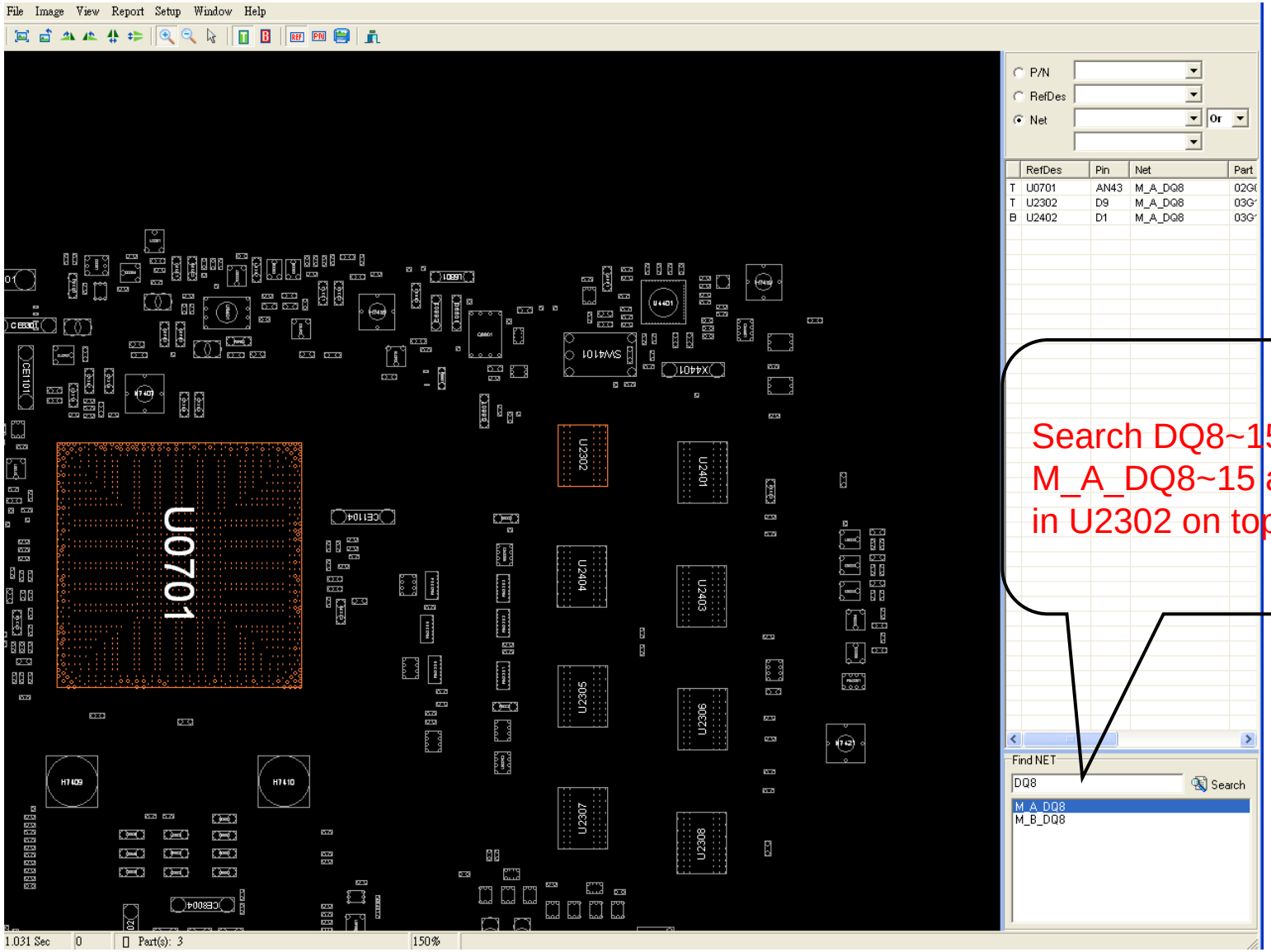

Pass 0/
Test 0/ ******
Test #3 [Moving inversions, 8 bit pattern]
Testing: 132K - 2014M 2013M
Pattern: 00000000
FSB : 200 MHz - Type : DDR-II
RAM : 400 MHz (DDR800) / CAS : 5-5-5-18 / Single Channel
AllTime Cached RsvdMem MemMap Cache ECC Test Pass Errors ECC
04:45:09 2013M 736K e820-Std on off Std 0 45824
Pass Failing Address Good Bad Err-Bits Count
0 00010010440 - 256.0MB bfbfbfbf bfbf40bf 0000ff00 45856
0 000100102f8 - 256.0MB bfbfbfbf bfbf40bf 0000ff00 45857
0 000100102f0 - 256.0MB bfbfbfbf bfbf40bf 0000ff00 45858
0 000100102e8 - 256.0MB bfbfbfbf bfbf40bf 0000ff00 45859
0 000100102e0 - 256.0MB bfbfbfbf bfbf40bf 0000ff00 45860
0 000100102d8 - 256.0MB bfbfbfbf bfbf40bf 0000ff00 45861
0 000100102d0 - 256.0MB bfbfbfbf bfbf40bf 0000ff00 45862
0 000100102c8 - 256.0MB bfbfbfbf bfbf40bf 0000ff00 45863
0 000100102c0 - 256.0MB bfbfbfbf bfbf40bf 0000ff00 45864
(c)configuration (SP)scroll_lock (CR)scroll_unlock

On Board Memory Test SOP

Warning: Because the last bit of failing address is 0 or 8 now, is DQ 0~31 group, and Err-Bits is 8~15 (0000ff00), so you need to find DQ8~DQ15 in PCB Repair.

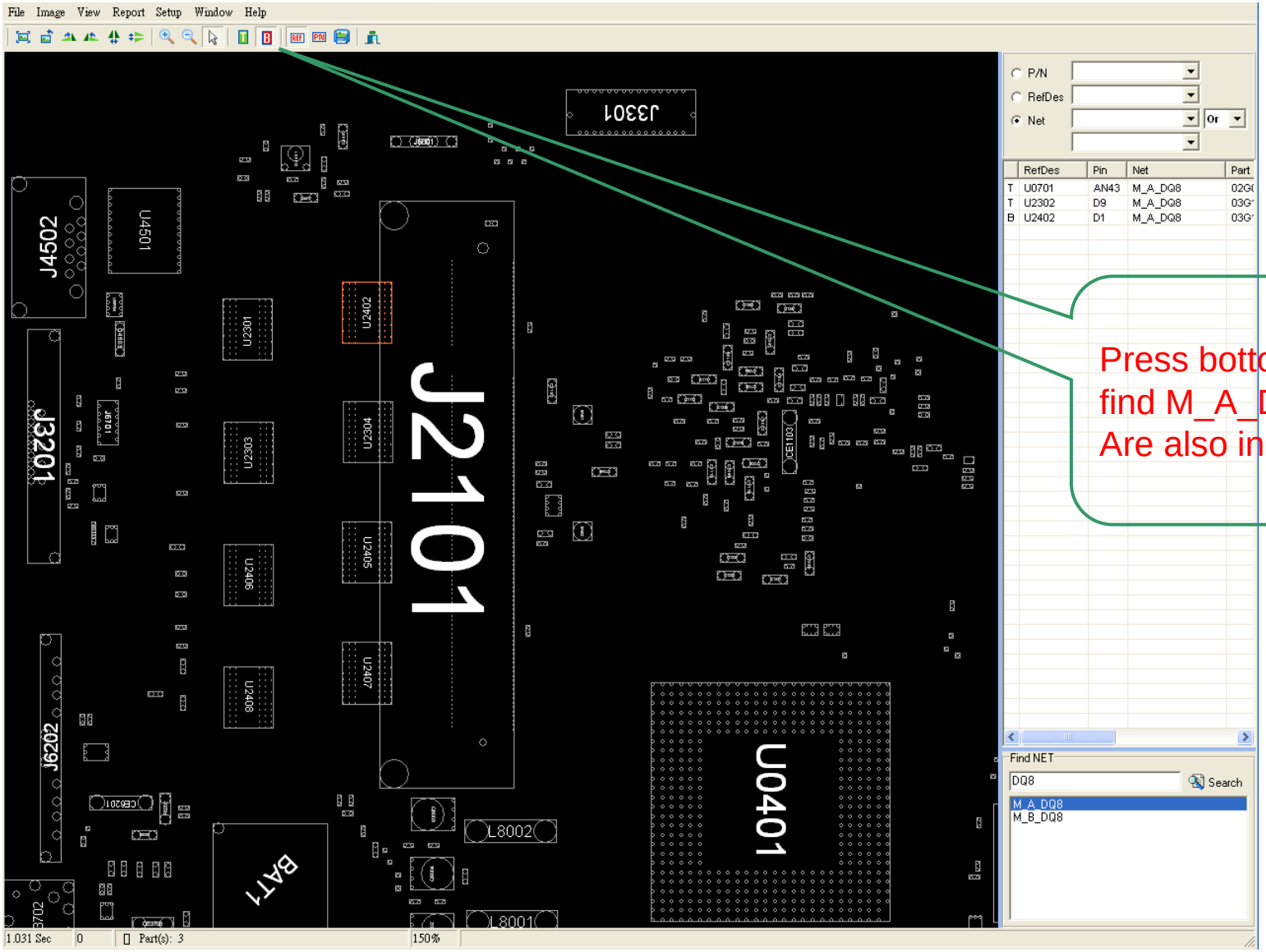
But if the last bit of failing address is 4 or C, is DQ 32~63 group, Err-Bits is 8~15(0000ff00), you must add 32 bits, find DQ40(8+32)~DQ47(15+32) in PCB Repair

On Board Memory Test SOP



Search DQ8~15,find M_A_DQ8~15 are all in U2302 on top

On Board Memory Test SOP



On Board Memory Test SOP

So you can exchange U2302 and U2402, and U23XX should be take priority over U24XX.

Warning: If the last bit of failing address is 4 or C, search DQ40~DQ47, find they are all in U2306 and U2406.

Chapter 13 WTP Test SOP

ASUSTeK COMPUTER INC.	WTP Test SOP	Doc. No:	
		Date: Mar. 04. 2011 Revision: 1.2D	
		Page:	Grade:

Rev.	Modification	Modify description	Issue div.	Originator
0309	V02		GRMA	Sumu

1. OBJECTIVES 1
2. SCOPE 1
3. DOWNLOAD 1
4. UPDATE : 1
5. EQUIPMENT 2
6. BIOS SETUP 2
7. NETWORK SETUP 3
8. PRODUCT SELECT 4
9. TEST FLOW 5
10. TEST INTERFACE 6
11. FUNCTION TEST: 8
12. TEST REPORT 27
13. ADVANCE TEST 28
14. APPENDIX 29

AGING TEST 29

LAN MAC WRITER 31

Authorize by		Review by		Originator by	Sumu

Form No : D2-001-11 Rev.01